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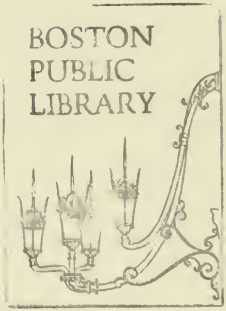

TRADE & TRANSPORTATION CENTER

OUTH TATION DEVELOPMENT ANALYSIS

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TRADE AND TRANSPORTATION CENTER

Analysis of South Station Development Potentials

Downtown Boston, Massachusetts

Prepared for

MASSACHUSETTS PORT AUTHORITY

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December 1965

Robert Gladstone & Associates
Economic Consultants
Washington, D.C.

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WASHINGTON, D. C. 20006 298-6141

December 27, 1965

Massachusetts Port Authority
141 Milk Street
Boston, Massachusetts

Gentlemen:

The following report sets forth results in our analysis of development potentials for the 23-acre South Station site in downtown Boston. This work was carried out in accordance with contract dated May 17, 1965 as amended September 16 and December 6, 1965.

Our assignment was to analyze need and demand for a Trade and Transportation Center at this location to be developed as a complex consisting of some 16 principal, secondary as well as supporting elements. In addition, we were to evaluate in preliminary terms the financial aspects of key center components, projecting revenues and expenses and, based on net revenues available, the indicated size of possible revenue bond issue in relation to capital outlay requirements.

Based on the study as detailed in the report text following, we find strong market potentials for the proposed complex, which would include the following:

- Special use office space
- U.S. Customs Service facilities
- Trade Mart
- Motor hotel
- Major parking garage

In addition, secondary and supporting facilities could also be included in the complex, as follows:

- Combined rail and bus terminal facilities
- Downtown-airport ground transportation and taxi facilities
- Heliport
- Retail sales and service facilities
- Special site servicing, circulation and miscellaneous supporting facilities.

We also find the proposed development to be financially feasible. Projections of revenue which might be realized from key facilities, net of vacancy and collection losses, operating expenses and in lieu of tax payments to the city of Boston, would support a revenue issue under typical terms adequate to cover indicated capital outlay requirements for the proposed center.

The report which follows is presented in three major sections. Background to the analysis including a description of the complex is set forth initially. Analysis of individual elements in the complex is covered in the second major part of the report. Finally, the recommended development program for the center and analysis of financial factors is summarized in the last part of the report. Graphic material related to the site, parking and circulation are included at various points in the report. The cover photograph highlights the location of the site in downtown Boston. Appendix material related to major parts of the report is also included at the back. Highlights of major findings are presented immediately following this letter.

Throughout the extensive field work and analysis required for this study, we received the generous assistance of many organizations, agencies and individuals. We particularly appreciated the guidance and cooperation of Mr. Edward King, Executive Director and Mr. Paul May, Development Director of the Port Authority. In addition, many individual members of the Authority's staff were of assistance on occasions too numerous to list individually here. We gratefully acknowledge this valuable aid. However, final responsibility for application and interpretation of all information received rests with this firm.

With the specific acquiescence of the Authority, the specialized work connected with parking and circulation problems at the South Station site was undertaken by the firm of Barton-Aschman Associates of Chicago, engineering consultants. Field work and analysis in this area was completed by Barton-Aschman; and Section 6 of the report on Parking and Circulation was prepared by them together with material relating to financial aspects of the parking structure in Section 8. In addition, Mr. F. Paul Morgan, Real Estate Counselor of Boston, was retained and rendered valuable assistance on numerous items based on his extensive experience in the Boston real estate market and especially with respect to railroad requirements and programs.

It has been a privilege to complete this assignment for the Port Authority. We would of course be pleased to respond with further information on any item which may subsequently arise in connection with this analysis or the development program at South Station.

Very truly yours,
ROBERT GLADSTONE & ASSOCIATES

Robert Gladstone

Robert Gladstone

HIGHLIGHTS OF FINDINGS

1. Based on studies of demand and supply factors operating in the Greater Boston area, we find strong market potentials for the proposed Trade and Transportation Center on the 23-acre South Station site in downtown Boston.

   a. Major components planned for the development should consist of:

      - 300,000 gross or 250,000 net rentable square ft., in a special-use, port-oriented trade and commerce office tower.
      - 90,000 square feet allocated to U.S. Customs Appraisers Stores functions including mail division facilities.
      - 480,000 gross, or 400,000 net rentable square feet in Trade Mart facilities featuring display and permanent exhibition areas for a wide variety of merchandising functions at wholesale and distribution levels in apparel, textiles, furniture and home furnishings, building materials and products and other industrial commodities.
      - 500-unit motor hotel with meeting, banquet and related facilities
      - 5,000 space parking garage designed to meet requirements in adjacent downtown and fringe areas as well as on-site needs including auto service facilities and linked to the heart of the retail core by special pedestrian conveyance.

   b. Secondary and supporting elements in the center should consist of the following:

      - Railroad terminal facilities including ticketing and trackage as well as ancillary facilities
      - Bus terminal including ticketing, waiting and bus parking areas
      - Heliport including ticketing, waiting and landing pads
      - Ground transportation facilities including limousine operations area and taxi line
      - Rapid transit facilities
      - Retail sales and service facilities
      - Miscellaneous functions including advertising displays, other consumer services, vending machine operations, locker areas, rest rooms, waiting areas and red cap services
      - Special site servicing and circulation facilities.

Complete details and background documentation developed on market outlook and development details for these facilities are set forth in the text of the report which follows.

2. The individual components of the complex as outlined above, draw their market strength not only from the interaction of area supply and demand factors affecting each component, but also from the combination of elements proposed. The more than three million square feet including the 5,000 car garage which might be developed here in the initial phase -- and nearly four million square feet in the ultimate development -- presents a unique opportunity for effective utilization of this South Station site to meet major downtown needs which might otherwise not be possible. Specific benefits would include the following:

   a. Creation of an important new, up-to-date merchandising unit to facilitate marketing functions in central Boston and strengthen the wholesaling role of the metropolitan area in the New England region.
   b. Improve convenience and strengthen shipping, trade and transportation as well as travel functions through Boston by concentrating key activities in a central location accessible to one another and to related activities in the downtown area.
   c. Provide a unified complex on a sufficiently large site, to house a broad variety of inter-related functions and facilities in the trade and transportation fields, meeting not only current needs but also indicated future expansion as well.

3. On this basis, it would be appropriate to plan for the specific complement of trade and transportation facilities as set forth above. The overall first phase program for major as well as secondary and supporting elements in the proposed center can be summarized as follows:

	Scale (sq.ft. and units)
a. Major Elements:	
1. Trade and Commerce Offices	300,000 square feet
2. Customs Appraisers Stores	90,000
3. Trade Mart - Stage I	480,000
4. Motor Hotel - 500 units	200,000
5. Parking Garage - 5,000 cars	1,850,000
Sub-total	(2,920,000)
b. Secondary and Supporting Elements:	
1. Rail-bus limo combined terminals	35,000
2. Main Concourse	30,000
3. Retail sales and misc. services	50,000
4. Heliport	10,000
Sub-total	(125,000)
c. Total	3,045,000 square feet

4. As part of this study, a preliminary analysis of the financial outlook for the proposed center was completed. Included at this time were financial projections for the five major elements in the center. Specifically covered were the offices, Appraisers Stores, Trade Mart, motor hotel and parking garage. Analysis of these facilities demonstrates the financial feasibility of the proposed development. Although detailed analysis of secondary elements cannot be completed now, preliminary investigation indicates that they will be financially self-sustaining.

   a. Gross revenue projections for the five major components are expected to reach $6.6 million in normal, early years. Allowances for vacancy and collection losses and operating expenses including maintenance should total $1.8 million. Project "capacity" to support payments in lieu of taxes to the city generally in line with current tax and assessment practices in early years should be at least $1.0 million, with the outlook for continued increases to a potential level of $2.0 million per year at ultimate development.

   b. Total estimated costs for improvements are estimated at approximately $40 million which, together with land acquisition, financing charges as well as contingency allowance would bring the total cost for major components of the project to a $48 million level. Available annual revenues applicable to debt service -- providing for 150 percent coverage -- are projected at $2,520,000. This sum would support a bond issue of $48 million under a 40-year term at 4.25 percent interest within the present trust agreement, conservatively projecting a level payment schedule. These terms are generally comparable with the recently-completed Port Authority revenue issue of $106 million.

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Part A. BACKGROUND

TRADE AND TRANSPORTATION CENTER

ANALYSIS OF SOUTH STATION DEVELOPMENT POTENTIALS

Section 1. Concept of Center

At the outset of this study, a series of key program elements were identified as potentially offering suitable development opportunities at the South Station site. All of the uses called for under the BRA redevelopment plans were included as a part of this group of possible program elements. Covering a total of 16 items, they can be listed as follows:

1. Major parking garage, including spaces for users in surrounding areas as well as on the project site.
2. Long distance, inter-city bus terminal.
3. Suburban bus terminal facilities
4. Railroad terminal facilities: including trackage, ticket offices, waiting and passenger areas and other ancillary facilities
5. Downtown air terminal: including ticketing, baggage, check-in and airport ground transportation facilities
6. Heliport
7. Taxi and vehicular pick-up facilities
8. Project servicing facilities

9. Post office depot

10. Truck terminal and break-point including storage and other ancillary facilities

11. Office space: including special uses related to Port of Boston; and commerce, trade and transportation-oriented occupancies

12. Motor hotel

13. Retail sales and service units including facilities oriented to specific as well as overall project elements

14. Rapid transit facilities

15. Display and exhibition areas, oriented particularly to regional wholesale merchandising, international trade and New England industrial users.

16. Special circulation facilities required to meet functional needs of proposed site development and related to surrounding traffic and transportation facilities

Common to the elements listed are two basic functions to be served by the proposed center -- promotion and facilitation of Boston trade and transportation operations. Both of these activities are an essential concern of the Massachusetts Port Authority. Similarly, they are a vital concern of the city. The suitability of this South Station site presents a unique opportunity -- not realizable in the same measure elsewhere in downtown Boston -- to effectively meet Boston needs and potentials for improvements in trade and selected transportation facilities.

The initial development concepts as set forth above have been precisely defined based on analysis of market and economic factors operating in the

Boston area; special development opportunities and potentials at the South Station site; and selected developments of a related nature in other localities including New York, Chicago, Atlanta and Dallas. Basic to the analysis of the overall development however, has been the classification of the potential program elements into three key categories, as follows:

1. Primary Elements. These development components would provide the "backbone" for the proposed center to be developed at the site. These elements would need to be proved feasible from both market and economic points-of-view, either singly or in combination in sufficient extent to support the overall development program.

2. Secondary Components. Although functionally important in their own terms, the secondary components would not play a critical role in establishing the character of essential success of the Center as proposed. Feasibility of these elements would neither drastically affect the basis for the Center nor decisions to proceed with its development.

3. Supporting Activities. These elements would be ancillary to major facilities -- both primary and secondary -- on the site. Their scale and number would be a direct function of the character and extent of major elements in the Center development program.

More specifically, the program elements can be listed by the role they would play in the proposed Center, as follows:

1. Primary Elements.

   - Trade, commerce and merchandising activities including major display, exhibit and marketing facilities for trade and consumer-oriented operations.

   - Special office uses related to merchandising activities, world trade and regional commerce.

   - Transportation elements including major parking garage, rail and transit facilities.

2. Secondary facilities.

- Long distance and suburban bus terminal facilities.
- Downtown air terminal operations.
- Heliport.
- Post office depot.
- Truck terminal.
- Limited general office space, supplementing and providing expansion reserve for special office uses.
- Motor hotel.

3. Supporting facilities.

- Taxi and vehicular facilities.
- Project servicing facilities.
- Retail sales and service units.
- Special traffic and circulation facilities relating proposed site improvements to the surrounding area.

The preceding listing -- especially as it relates to the primary or "critical" facilities -- provides the basis for the feasibility analysis of the overall center complex used here. Key individual components proposed for the Center are analyzed in subsequent sections.

Part B. ANALYSIS OF PROPOSED ELEMENTS

TRADE AND TRANSPORTATION CENTER

ANALYSIS OF SOUTH STATION DEVELOPMENT POTENTIALS

Section 2. Office Space

In this Section of the report, specialized markets for office space as part of the commerce and transportation complex proposed for South Station are analyzed. As described previously, the proposed complex could contain a trade mart, a variety of transportation elements, hotel, a parking garage and an office building. Both trade and transportation oriented office activities would be encouraged to locate in the South Station office structure in line with the specialized functions planned for this area. Although some general office tenancies might also be expected, specialized office uses along the lines analyzed below, would provide the main market support for the South Station development.

Trade Center and Office Functions

Analysis of the Boston area economy indicates need and potential for a center which would function to facilitate trade by providing new merchandising facilities and concentrating private and public offices engaged in such activities.

A key component in the center would be a mart featuring merchandise display areas, adjoining sales office space and related supporting activities. Analysis of proposed mart facilities and their operation are set forth in a subsequent section. A second and equally important component would be a consolidated office area oriented to regional commerce, international trade and transportation activities.

The establishment of a center combining these features would create important strengths in trade and commerce for Greater Boston and New England. This consolidated facility would enhance the Port's position to serve users in the most effective manner. As competition among major regional shipping points along the east coast continues, port services become increasingly important as a factor in generating shipping activity.

More specifically, key values of the center would include the following:

- Simplification and acceleration of administrative processing for the movements of cargoes through the Port of Boston.
- Centralization and improvement of trade information services presently scattered throughout the port area.
- Centralization of key trade and transportation activities at a single location.
- Establishment of a central location for agencies for the United States Government and other governments directly concerned with commerce for the Port of Boston.

- Simplification of communication among members of the trading community in the Port of Boston area.

- Promotion of export activities among local producers of goods and services by providing improved information services related to foreign markets.

The Trade Center as presently conceived would encompass several functions including: regional and international merchandising and marketing facilities; international trade services; and trade information center disseminating factual background and educational materials related to Boston trade activities. Although the "accommodations" required for these functions are varied -- office space, exhibit area, storage facilities -- their linkages to one another and the overall Trade Center should be described at this point before analyzing the special office markets which could be served at the center.

Marketing Activities

A variety of activities are carried out under the marketing function. Included would be sales generated through agents, jobbers, wholesalers, salesmen or buyers located in Boston or elsewhere in New England. Another key channel of marketing would be direct distribution of goods by producers to dealers or final users through subsidiary agencies. Some firms variously use one or more of these distribution channels depending on the requirements of individual markets and the traditional patterns for their industry and company.

Covering the complete range in the marketing process, exhibition facilities at regional sales centers for permanent and temporary displays have been used with increasing effectiveness as an important marketing tool. As mentioned previously, the Trade Center would include merchandising space of this type in addition to offices and other activities programmed. Details of this component in the projected South Station complex will be presented in a subsequent section of the report. Special office use areas are analyzed below.

Trade Services

Concerned primarily with the administrative processing of import and export movements, trade services monitor a network of goods movement through Boston's transportation system. International cargoes passing through the port are subject to Federal laws and regulations administered by various Federal departments and agencies. Although a number of official agencies are concerned with foreign trade products and commodities, the primary responsibility for enforcing laws related to goods movement into or out of the country lies with the United States Customs Service.

Custom Operations. Customs documentation and clearance is critical to the administrative process for moving goods into or out of the United States. This process is primarily divided between two locations in the city of Boston at the present time -- the Customs House at the foot of State Street and the Appraiser's Stores on Atlantic Avenue. With certain exceptions, all documents necessary for the clearance for each shipment passing through the Port of Boston are filed at the Customs House and duties and charges are paid there.

A sample of every commercial shipment must be examined by the appraiser's staff for determination of dutiable value and for the correct tariff description which governs the rate of duty. In order to carry out this examination, samples of incoming shipments are sent to the appraisers stores for necessary inspection. Merchandise examiners carry out actual inspection and submit official reports on invoices and related entry papers which form the basis for the assessment of duty by the Collector of Customs.

Since actual examination is an integral part of the Customs import process, a strong functional linkage exists between the appraisers store on the Atlantic Avenue and the Customs House at the base of State Street. A continuous and heavy flow of paper work passes between these two points. In addition, substantial communication through telephone and personal contact between the Customs offices at both locations also takes place. Current space utilization and anticipated needs for this agency are described in detail in a subsequent paragraph.

Customs Brokers. Directly concerned with the clearance of imported goods through Customs, each customs broker must be licensed to practice by the Commissioner of Customs. Approximately 20 Boston firms are engaged in processing customs papers for the 58,000 formal entries filed in this District annually. A formal entry is defined as a commercial transaction valued at $500 or more. Counting in-

formal entries largely consisting of individual and personal imports, actual entries processed exceed 62,000. In addition, custom brokers are engaged in filing documents for goods in transit between the Port of Boston and other points in the United States. Posting bonds permitting the release of goods before final determination and a series of other administrative activities are among the services performed by customs brokers.

Other services provided by these agents include determining the type of entry (consumption, warehouse, transit, temporary, etc.) and classification which will best suit purposes of the importer. Final determination of entry type is critical to obtaining the most favorable rate of duty and evaluation for the goods imported. The broker must not only follow the movement of the entry documents through the Customs House and the appraisers stores, but must often consult the appraisers' examiners before action is taken on vital matters of rate, value, marking of goods and other factors affecting landed costs. This service is taking on increasing importance in light of rapid developments in scientific and technical instruments as well as other sophisticated commodities not fully described nor anticipated by customs regulations presently in force.

Foreign Freight Forwarders. Nearly all licensed customs brokers are also registered as freight forwarders and engaged to some extent in export forwarding. The size of firms engaged in this activity varies from small operations consisting of one or two persons to larger organizations which handle a substantial volume of

transactions annually. Freight forwarders in Boston process approximately 50,000 export transactions a year according to the Customs Service. While fluctuating from year to year, New England export transactions in 1965 were up appreciably over 1964 levels. Many of these transactions also require processing through one of the foreign consulates located in the Greater Boston area where specialized import procedures are applicable.

A primary function of the international freight forwarder is to arrange for the movement of goods from the point of production or sale to the point of export. Shipping arrangements by carrier, routes best suited to the needs of the exporter to foreign port of discharge and beyond that, through his counterpart abroad to the ultimate destination, must be arranged. The foreign freight forwarder must be expert in his knowledge of shipping practices, cargo handling requirements, freight tariffs, documentation requirements and other technical matters involved in the transportation by rail, truck, air and water in this country and abroad.

The forwarder also prepares many of the export documents such as consular invoices, when required, and the export declarations which he takes to the Custom House for validation. Detailed descriptions of this industry as well as the customs brokers appear in subsequent sections. As in the case of the customs broker, foreign freight forwarders are concentrated around the Customs House in Boston and relatively distant from the majority of foreign consulates which are scattered throughout the Boston central business district and elsewhere in Boston.

Supporting Services. In addition to customs brokers and freight forwarders, a variety of other service functions are located in the Port of Boston and are important to the effectiveness of international commercial transactions. Included in this group are marine insurance companies, law firms, and other supporting commercial services such as public relations, advertising, trade publications, and management consultant firms. The activities of some of these organizations are primarily related to international trade while others are substantially oriented to domestic activities with only incidental involvement in overseas commerce.

World Trade Center

Many corporations and individuals engaged in importing and exporting through the Port of Boston have expressed a direct interest in supporting activities sponsored by the World Trade Center, an organization devoted to education and promotion in connection with New England international trade. Providing a wide variety of services including promotional activities, seminars on key trade issues, dissemination of information affecting overseas commercial activities and advertising the assets of the Port of Boston, the World Trade Center has expanded its activities considerably in recent years. Indications are for further expansion and that present space occupied by this quasi-public agency will require sizeable additions in the period ahead.

The World Trade Center can be of invaluable assistance to exporters and importers who require a wide variety of information in connection with the complex procedures involved in moving goods from one country to another. Such information is required for virtually every aspect of international trade, ranging from simple inquiries on location of steamship piers to complex issues related to foreign markets or financing. Each overseas market poses problems peculiar to that locale. By grouping efforts through such an organization as the World Trade Center, considerable assistance can be gained for New England exporters and importers in tapping new market areas. Such programs are directly in line with national programs -- sponsored through U.S. Department of Commerce and other agencies -- to extend U.S. "selling" overseas and improve the current balance of payments situation.

> The need for a trade "institute" carrying on functions similar to the World Trade Center and conveniently accessible to concerns engaged in international commerce is great. Proximity to other groups and agencies providing information on aspects of world trade would also be useful to Boston and New England traders. These agencies include local and regional field offices of: United States Department of Commerce; Massachusetts Department of Commerce; Federal Trade Commission; various foreign consulates; Massachusetts Port Authority; and related services such as the United States Passport Service and Customs Service. Centralization of these services in the international trade center envisioned at South Station could measurably improve marketing and shipping of New England goods, as well as add to the convenience of international travel through Boston.

Potential Office Users

Specialized functions of the proposed Trade Center at South Station have been described in general terms in the preceding section. In this section, specific markets for space in a proposed office tower at South Station are examined.

Trade Mart

Space demand for merchandising activities oriented to display as well as sales office space has been studied and is reported separately in a later section. Trade Mart space requirements -- at appropriate scale -- could be met in areas located at the base of an office tower or in a separate, nearby structure. Trade Mart space and functions however, are independent of the office areas proposed and draw on a distinct and different market.

Trade Services

Trade services -- as mentioned earlier -- have been divided into two principal classifications: U.S. Customs Service and various private firms engaged in processing of goods entering or leaving the Port of Boston. Each of these is covered below, followed by analysis of related special office uses which might appropriately be attracted to the South Station complex.

United States Customs Service. As noted previously, customs operations in the Port of Boston are divided primarily between the Appraisers Stores on Atlantic

Avenue and the administrative processes incidental to general customs operations, carried on at the Customs House at the foot of State Street. Our interviews with officials of the Customs Service show that consolidation and streamlining of Customs activities in Boston would result in more efficient operations providing improved services. At a minimum, the most important changes indicated would be to simplify and expedite processing of cargo through the port. Location of both the Collectors and Appraisers sections at a single point would be fundamental to improved service.

> Representatives of the Customs Service favorably regard a possible South Station site for consolidating their operation. This location provides centrality with respect to port facilities and could easily be reached by vehicles carrying entry samples for examination at the appraisers stores. Administrative processes carried on by the general office section of the Customs House could be located directly above these stores, facilitating the flow of paper work involved in Customs examinations and assessment.

A South Station location would also prove attractive for trade services integrally linked with the customs operations. Custom brokers, freight forwarders and supporting services could be accommodated directly in or nearby the South Station office development. Other groups requiring proximity to the Customs services -- export-import operations of local industries (wool, leather, etc.) are already located close to this lower Summer Street site. Foreign traffic sections of major downtown department stores, another key group concerned with customs, are also within easy reach of South Station.

At the present time, the U.S. Customs Service in Boston occupies approximately 96,000 square feet. The largest share of this is taken by the Appraisers Stores, totaling about 73,300 square feet in four to five stories at 407 Atlantic Avenue. Customs administrative processes are carried on in some 22,900 square feet located directly in the Customs House. Other customs occupancies include space at Logan Airport and at the South Station Postal Annex. Some consolidation between the mail division -- totaling 14,000 square feet at the Annex -- with other customs operations might be anticipated in the event a new facility were developed in the vicinity.

At present, Boston's customs operation includes five operating divisions: Appraisers Stores; Laboratory; Comptroller; Customs Agent; and Collector. Reorganization of the Customs Service currently underway will change Boston's administrative framework. Under the reorganization plan, a series of regional offices will be established throughout the U.S., consolidating a multiplicity of district offices. Aimed at expediting the entry and clearance of vessels and imported merchandise, simplifying the clearance of persons and their effects, and reducing backlogs and eliminating delays, these new arrangements will soon be implemented in Boston.

Regional reorganization in Boston is expected to add between 15,000 and 20,000 square feet in total space needs for local customs operations, according to

agency officials. At the present time there is some question as to whether regional functions will be consolidated directly with the local office. In the event that these two administrative branches are maintained separately, it is conceivable that the new regional offices might occupy the present Customs House space while the existing district administrative operation might be shifted -- along with Appraisers Stores -- to a new, modern facility consolidating all operations carried on at that level.

> Regional reorganization for the current district of Boston will extend considerably the area presently covered within the district for customs operations. Key district headquarters groups now included within the Boston region are as follows: Portland, Maine; St. Albans, Vermont; Boston, Massachusetts; Providence, Rhode Island; Bridgeport, Connecticut; Ogdensburg, New York; Buffalo, New York. Specific ports of entry included within each of these district offices and now under the supervision of the Boston region are shown in the Appendix attached at the back of this report.

Private Trade Services. The need for extensive and frequent communication between various trade services dealing with the import and export of goods is demonstrated by present locational patterns. According to our field survey, an overwhelming share of the city's customs brokers and freight forwarders (between 85 and 95 percent) are located within one or two blocks of the Customs House. Remaining establishments engaged in these services are located elsewhere in the central business district, within relatively easy communications distance of the Customs House. Key private trade groups are discussed immediately below.

1. Customs Brokers/Freight Forwarders. Customs brokers and freight forwarders occupy approximately 42,000 square feet in downtown office space, according to our field survey. While the quality of space occupied varies, for the most part these operations are located in first-class buildings, featuring ample elevator service, modern decorated office bays and with other first-class features. Of the 25 firms directly surveyed, about 12 occupied substantial office space ranging from about 1,200 square feet to 7,000 square feet.

> In our judgment, a substantial portion of the space currently occupied by customs brokers and freight forwarders in the vicinity of the Customs House could be transferred to the projected South Station office tower in the event that U.S. Customs selected that building to consolidate its present downtown Boston facilities. We believe that the larger operations in particular, would seek to maintain representation close by Customs and would tend to move their entire office operations if space were available on a competitive basis.
>
> We conservatively calculate that about one-third of the present customs brokers and freight forwarders space could be attracted to the projected South Station tower -- about 14,000 square feet in all. We would also expect some expansion to take place with the moves from existing to new space. We estimate that this expansion would come to about 2,000 square feet -- based on a conservative factor of 15 percent expansion. Projected trade service potentials therefore, would total about 16,000 square feet.

2. Marine Insurance and Other Trade Services. As noted previously, a wide variety of other service functions located in Boston are important to the effectiveness of the port as international trade center. Included in this group are

marine insurance companies; law firms specializing in admiralty and customs matters; trade associations; marine surveyors; ship brokers; and naval architects. Also included would be non-profit associations dealing with maritime activities such as the Pilot's Association, International Organization of Masters, Boston Marine Society and other similar groups. Another trade service would be sales offices of cargo and passenger steamship lines located in the Boston area.

According to our field surveys, companies engaged in marine insurance (with additional services in fire and casualty and life underwriting in some instances) occupy about 63,000 square feet in the vicinity of the Customs House. As in the case of customs brokers and freight forwarders, virtually all firms engaged in this service in Greater Boston are within a short distance of the Customs House. Since activities of these firms extend beyond marine insurance alone however, it would appear that proximity to the Customs House is not always a major locational factor with respect to their offices.

> At least two major firms specializing in marine insurance and occupying considerable space were identified in our field surveys. We estimate conservatively that approximately 35,000 square feet out of the total 63,000 surveyed is occupied by companies "primarily" engaged in marine insurance activities. The remaining 28,000 square feet is occupied by concerns with complementary insurance activities.

Proximity to Customs House operations, customs brokers and freight forwarders is regarded as a key locational factor by companies specializing in marine insurance.

In our judgment, a substantial share of downtown Boston's present marine insurance office area would be transferred to or nearby the proposed South Station development if United States Customs were to move to this location. We would estimate conservatively that approximately one-quarter -- 15,000 square feet -- of the space presently occupied by marine insurance companies could be attracted to the projected South Station office tower under these circumstances.

3. Steamship Companies. We estimate that approximately 25,000 square feet of office space is presently occupied in downtown Boston by sales and administrative offices of steamship lines. Scattered throughout the central business district, these activities show less sensitivity to Customs operations than either the custom brokers/freight forwarders or marine insurance firms analyzed above. Nevertheless, an appreciable proportion (an estimated 60 to 70 percent) maintain office locations close to the Customs House. The bulk of these are in freight shipment, although some passenger lines are also represented.

We believe a significant transfer of city steamship line offices to the proposed South Station can be expected if a unique transportation and international trade complex is created at that location. Cargo lines -- as noted above -- retain close ties with customs, freight forwarders, and other maritime oriented activities. Passenger lines would likely favor a South Station location in our judgment, for proximity to other shippers and advertising values gained from a specialty building

-- only a few blocks from Boston's 100 percent corner along a renewed shopping and commercial core on Summer Street. Based on current locational patterns and preferences, we conservatively estimate that 12,000 total square feet of office space in the projected South Station tower could be leased to steamship lines.

4. Other Maritime Offices. In addition to the trade services and supporting activities described above, we would expect a smaller portion of non-profit maritime oriented space to move to the projected tower. Included in this group of activities would be the trade associations, labor associations, and other groups promoting specific maritime interests. Conservatively estimating these, we calculate that approximately 3,000 square feet of office space could be taken up by such activities.

5. Massachusetts Port Authority. An additional prime tenant of the South Station office building would be the Massachusetts Port Authority, according to our understanding. As a major agency involved with domestic and international communications, location of these offices side by side with other activities engaged in transportation and trade fields would strengthen the overall effectiveness and efficiency of the Port of Boston and the proposed Center.

> Presently occupying about 9,500 square feet at 141 Milk Street, appreciable expansions in space requirements are anticipated for Authority offices, we understand. This additional space will be

needed to offset existing deficiencies, accommodate some consolidation as well as prepare for future needs. According to our information, the Authority would occupy about 20,000 square feet in the projected South Station tower.

Railroad Offices

Additional specialized trade and transportation occupancies in the proposed South Station tower could include railroad offices, according to our field surveys. Preliminary estimates have been obtained in discussions with railroad representatives. At the present time, administrative office space needs for the New Haven and New York Central lines are estimated at about 20,000 square feet and 5,000 square feet, respectively.

Note on MBTA

While not examined specifically at this time, there is reason to believe MBTA may consider a new in-town location and might ultimately be induced to lease space in the projected South Station transportation center. We understand that MBTA offices will be expanding further and that space indowntown Boston is preferred to extensions at the present Arborway location.

Various developments not yet fully concluded would contribute to possible MBTA South Station occupancy. Included in these are a possible move of the Authority's 12-acre yard at Bennett Street in Cambridge to a South Station site; relative inconvenience of present offices at the Arborway; and desire for a

location convenient to other Boston offices. Total Arborway space currently occupied by MBTA is probably on the order of 30,000 square feet and the agency has need for an additional 20,000 square feet, we understand.

Specialized Office Space Demand

Based on field surveys and analysis of major trade and transportation activities, we believe firm markets among the selected groups of specialized activities could account for an appreciable portion of space in a projected South Station office tower. Key to successful development of a Trade Center office building would be the relocation of the United States Customs Service operations to the South Station complex. Occupying approximately 110,000 square feet in total at the present time -- including the 14,000 square foot postal section -- it appears that virtually a direct one-to-one transfer could be anticipated in the event that the Service was to relocate and consolidate its operations at this location.

The relocation of the U.S. Customs Service would create a "ripple" effect among downtown office users oriented to port and trade activities, in our judgment. We would anticipate that appreciable transfers from current space to the South Station location could be expected among customs brokers, freight forwarders, marine insurance agencies and other supporting trade services.

As previously noted, a number of other selected special uses with functional linkages to trade and transportation activities could logically become a part of the South Station complex. Included for example, would be the MBTA or similar agencies, United States Department of Commerce, foreign consulates and related governmental activities such as units of the State Department. Based on our field surveys and interviews with key officials, we estimate that an additional potential of approximately 50,000 square feet would be available at the South Station tower based on groups such as these.

Estimates for each of these groups and their respective space needs are summarized in the table below.

Table 1. SUMMARY OF POTENTIALS, SPECIALIZED OCCUPANCIES, SOUTH STATION OFFICE SPACE

Activity	Total Square Feet
U.S. Customs Service	43,000 1/
Customs Brokers/Freight Forwarders	16,000
Marine Insurance Agencies	15,000
Steamship Lines	12,000
Other Maritime Offices	3,000
Massachusetts Port Authority	20,000 2/
New Haven Railroad	20,000 2/
New York Central	5,000 2/
Miscellaneous Special Uses	50,000
Total	184,000 sq. ft.

1/ Excludes nearly 90,000 square feet for Appraisers Stores and Postal Annex operations which should be in single level space at grade. Includes allowance of 20,000 square feet for customs regional offices.

2/ Preliminary estimates.

General Occupancy Market

Central Boston general office inventory has expanded sharply in the recent past with the addition of several major office buildings. The Prudential Tower and the State Street Bank building alone add nearly 2 million gross square feet, accounting for an estimated gain of some 10 percent in the total core area office supply. Indications are that leasing in both of these buildings has been satisfactory with levels between 85 and 90 percent in each at the time of our field surveys.

> Analysis of overall markets for downtown Boston office space based on current market patterns, anticipated employment gains, changing space utilization patterns, and replacement requirements shows that an annual demand of more than 400,000 square feet can appropriately be anticipated on the average in the period ahead. This projected average gain may be higher or lower in any individual year, but should still hold to the average range estimated for the next period of years. These projections are conservative in terms of the current market absorption rates which range from 500,000 to 600,000 square feet of new space annually.

Anticipated expansions in general office occupancies have generated appreciable development activity for new, first-class downtown office space in recent years. Apart from the Prudential Tower and State Street Bank building mentioned above, prominent additions have included an extension to the Travelers Insurance Company building, the Kennedy Public Office Building in Government Center, an adjoining State Office Building and One Center Plaza.

Several smaller structures containing about 300,000 square feet in total have also been added. Cabot, Cabot and Forbes will shortly begin a sizable building at the downtown entrance to Government Center. While no definite plans have been announced, it is also known that the First National Bank plans to construct a structure in the 900,000-1,000,000 square feet range and other private developments of appreciable magnitude are projected for the Government Center, the Waterfront Renewal area, as well as other nearby areas in the period ahead.

Government Offices. Public agencies have long been an important tenant in private, leased office space. Newly completed public buildings will result in the relocation of substantial government office areas from present CBD buildings, influencing the private market sector for a number of years. Both Federal and state offices are involved in these moves to new public buildings expressly constructed to meet their needs. By the end of this transition period, Federal offices will vacate an estimated total of 530,000 square feet of private leased space. As a result, almost all Federal offices will be in government owned space for the first time since the pre-World War II period. Transfers of state office occupancies from private leased space will also bring an overwhelming proportion of these occupancies into publicly-owned facilities. The impact of these moves with potential vacancy increases in older buildings, should set upgrading programs in motion to improve the competitive position for many of

these facilities in relation to newly-constructed office space.

> While no direct data are available, considerable renovation activity has already been noted in downtown Boston. Improved square footage added to the CBD inventory in this fashion would augment the available supply of "better" space and serve to increase effective supply to serve the anticipated gains in general office demand in the period ahead.

South Station Potentials. General occupancy markets in downtown Boston can be expected to become more competitive in the foreseeable future as prospective new additions and renovations to older space continue. Although offices at South Station would be well-located in terms of transportation convenience for virtually all users, the structure should not be oriented to a broad general market based on its location in relation to "traditional" downtown office sites as well as its planned special trade and commerce role.

We would estimate however, that a five percent penetration of average annual new space potentials for the downtown -- or approximately 70,000 square feet in general occupancies -- could be readily attracted to the South Station facility during a three year planning and market period, possibly beginning in 1968 in advance of completion and terminating in the early 1970's.

> These general occupancies, in the initial period of the buildings "life" will serve to provide an important reservoir of expansion potential for the dominant trade and transport-oriented uses planned. With passing time, it can definitely be expected

that the special use group will expand in terms of both added space required for existing occupants as well as new occupants in allied fields. These incremental growth requirements can be met by normal turnover among the general occupancy lessees.

Projected South Station Tower

Considering specialized office-use potentials analyzed earlier and projected general office occupancies, the South Station Trade and Commerce Tower should be planned for a total of 250,000 net or 300,000 gross square feet of floor area. The dominant tenancy would be in specialized uses -- approximately 75 percent -- with the remainder at the outset in general occupancies characteristic of Central Boston. Because of the critical role in the overall building development program and special design requirements of selected key occupants of the proposed building, we would recommend a commitment for occupancy be secured from these users prior to finalizing building plans.

Based on our estimates of overall market potentials, ease of access, extensive and convenient on-site parking proposed and attractive features of the planned CBD Summer Street reconstruction, we believe an office tower at this site containing up to 300,000 gross square feet could be leased within a reasonable period of time. We also judge that the special uses programmed for this structure would complement other trade and transportation activities programmed for the South Station site, even though markets indicated for the projected building and the associated customs activities would be attracted independently of them.

TRADE AND TRANSPORTATION CENTER

ANALYSIS OF SOUTH STATION DEVELOPMENT POTENTIALS

Section 3. Trade Mart

Space for merchandising activities at the wholesale level is a central element of the proposed South Station trade center. The traditional role of Boston in New England distribution; the availability of the sizeable and uniquely well-located South Station site; the role of MPA in sponsorship as a part of its "mission" to develop commerce; and the specific potentials for a trade mart are basic to our positive findings for this facility in the proposed complex.

> The Trade Mart could play an important role in the overall program of revitalization in the Boston core area. Conversely, to overlook the marketing benefits which could be served by such a facility and its related programs, would be to forfeit a timely opportunity to strengthen this critical economic function for metropolitan area and central city. Although Boston's role as the hub of New England marketing is traditional, it is subject to attack from other metropolitan subcenters in the region as well as from such nearby national centers as New York, Chicago and -- for specialized commodity groups -- even more remote locations now accessible by high speed transportation.

Within the metropolitan Boston area, the potential outlook is for fragmentation of marketing functions to diffuse, suburban locations relatively isolated from one another as well as from related activities. Some phases of such a dispersion -- especially those related to extensive production operations and storage requirements -- would be appropriate in terms of individuol firms as well as central city needs. However, the location of the "market" -- where buyers and sellers can conveniently congregate -- has traditionally been and can definitely continue to be in the central city. It is at this point where regional transportation; a vast array of supporting and related services and activities; hotels; entertainment facilities, restaurants; shops and stores, come to a focus. Marketing activities can be most effectively performed centrally and they are an important component in the central city complex.

> What is needed however, is updating and upgrading of Boston's marketing facilities. In addition, continuous and systematic promotional efforts, broadening the reach and penetration of Boston's "marketers" in key commodity groups would also be critical.

The availability of the South Station site presents a unique and timely opportunity to respond to Boston's needs. The site is conveniently located with respect to the existing center of marketing activity in downtown Boston. It is also highly accessible via central artery and Massachusetts Turnpike and their extensions into the region's hinterland on Interstate Highway routes, such key regional transportation facilities as the MBTA, existing rail and bus terminals, and

Logan Airport. The projected northeast high-speed rail corridor connecting Washington to Boston -- underway with a $90 million authorization from Congress for demonstration programs and engineering analysis -- is also expected to terminate at South Station. Finally, the 23-acre site at South Station is sufficiently large to support a complex of inter-related and mutually supporting trade and transportation facilities unified with the Central Business District.

Function of The Mart

By focusing marketing activities of distribution enterprises in Central Boston, the Mart would enhance and strengthen these functions in a variety of key commodity groups. To perform this task effectively, the Mart must provide complete, up-to-date physical facilities at appropriate economic cost. In addition however, the Mart must either assist or become directly involved in making "markets" or, put another way, promoting this marketing center and its merchandise in the region.

Physical Facilities. The principal use of the Mart would be for exhibit, display, office and related operations by a wide variety of enterprises active in producing, wholesaling, jobbing and distributing various types of commodities. Space provided would be individual, fully-partitioned areas, arranged in sequence by related commodity groups. The structure can be multi-level although

the total floor area on each level should be substantial -- on the order of 40,000-50,000 square feet. All space must be directly accessible by wide corridors with showcase-type windows for merchandise display.

All spaces would be permanently occupied on a year-round basis under lease term which should desirably extend for a number of years. Showroom areas would probably be manned on a regular, even if not fully continuous basis. This would generally conform to the pattern typical in existing merchandise marts in other parts of the nation. In addition, a central display management service could be provided by the Mart in the institutional/exhibit areas. This point is discussed in further detail subsequently.

In addition to the showroom areas, a number of other features of the Mart and related on-site facilities would be important. Adequate goods receiving and handling facilities including off-street tractor-trailer parking and docking would be critical at a central servicing point for the Mart. Temporary storage areas should also be provided perhaps adjacent to docking and receiving.

Provision of freight and passenger elevators for the specialized needs of this building require particular attention. Relatively high ceilings (12 feet) and heavy load-bearing floor are essential to versatality in the building. The structural framing system should permit relatively long clear spans in at least one direction for display arrangements as well as modular placement of permanent partition walls between the exhibition spaces.

Because the South Station complex is to be developed as a trade and transportation complex, a broad variety of related facilities would be available to maximize the convenience and attractiveness of the Mart, even though not located within the Mart building itself. Most important among these would be the proposed hotel of approximately 500 units, featuring not only sleeping accommodations for transients, but also meeting rooms; catering and banquet halls; conference facilities and "sample" rooms. In addition, other key units on the site would include restaurants; banking facilities; office areas; retail sales and service units; and transportation facilities providing connections to all parts of the metropolitan area and the region.

Services and Promotional Activities. The creation of a successful Mart, as already indicated, involves substantially more than the construction of real estate improvements. The Mart is an enterprise in its own terms, which uses the mart building as one element in its operations. Two key features of the Mart "enterprise" with major implications for management and operations can be identified at this time -- special services and promotional activities.

Among the special services which could appropriately be provided by management OF TRADE MART are the following:

- Central reception, security and visitor registration. Located at the entry lobby level, a reception center would serve to provide visitors with information about the Mart, its activities; guide buyers to specific display areas; and control non-buyer traffic by screening visitors, as desired by Mart occupants.

- Mart tours. Guided tours through the building's display areas featuring specific commodities could be provided by management. The tours could be run on a regularly scheduled basis for groups of individual visitors and for organized groups on a special appointment basis. Such a program would serve exhibitors by increasing their product exposure and the Mart in terms of its public relations value.

- Central display management. Selected commodities could be most appropriately displayed in permanent exhibit areas open to major pedestrian traffic flows. Examples are architectural products and building materials; industrial goods; and selected consumer "durables". Travel and tour displays; economic development and similar promotional exhibits have like requirements. The individual exhibitors may choose not to fully man their display on a continuous basis. To meet this need, Mart management can provide trained personnel, knowledgeable in the material exhibited, to guide visitors, respond to inquiries, distribute product literature and secure contact names and addresses. These Mart personnel would be continuously on duty at a centrally-located desk on the exhibit floor during M art open hours.

- Secretarial services. Telephone answering, steno pool and typing services on an as-used basis should be available in the building for traveling sales people and other Mart occupants who might not otherwise require continuous secretarial service. Similarly, reproduction, direct mail and listing services should be made conveniently available to Mart groups within the building or nearby.

- Display and exhibit preparation. Included here would be receiving, crating and uncrating goods as well as delivery to the individual display areas. Because "style" of merchandise presentation is critical, these services can be extended to include design and installation of the product, its setting and special effects including lighting.

Individual firms and trade associations may engage in intensive promotional and show activities to attract buyers to the Mart as well as to area hotels, the War Memorial Auditorium and other locations during the seasonal market. However,

Mart management can effectively supplement these activities in combination with tenant groups or assume the major role where these efforts would not otherwise be undertaken. Special promotional activities -- whether independent or in combination with Mart occupants -- could include the following items:

- Special Events and Shows. Included would be promotional events, designed to focus on introduction of new merchandise, changing style lines in selected fields, special exhibitions put on display within Mart showrooms and similar activities. These could be conceived, organized and promoted by the Mart, its occupants as well as the industries represented separately or in combination. As discussed in further detail subsequently, major area "shows" in apparel, furniture and home furnishings lines presently take place in a variety of locations -- although increasingly in the War Memorial Auditorium. Mart promotional events should definitely be coordinated with these seasonal shows, extending the range of activities taking place in Boston at these times. Rather than competing with the present shows, Mart promotions could complement them, adding to buyer interest and area attractiveness as a marketing center.

- Direct Mail Activities. Although a basic technique to stimulate buyer interest for shows and other special events, comprehensive mailing lists of buyers in appropriate commodity fields can also be used as a tool to release information on new products, special Boston area activities and other information related to the Boston marketing center, apart from specific seasonal show or marketing periods.

- Clinics, Seminars and Other Educational Programs. In order to attract as well as focus buyer interest, drawing them to special events and shows, the Mart can sponsor clinics, management and merchandising seminars, discussion meetings and receptions for buyers. Among other activities, included here can be presentations by prominent and knowledgeable speakers on accounting, inventory and sales techniques and retail problem-oriented sessions catering to special needs and concerns of regional merchants.

The promotional activities, special Mart services and physical facilities provided are designed to serve and stimulate purchasing from both intermediate and final consumers. The Mart showrooms, in operation on a year-round basis, will generate continuous marketing activity, provide a regional sales base and display center, reaching a broader variety of customers with more complete services than would otherwise be possible using temporary, "show" marketing techniques only. Accordingly, as in established marts elsewhere, buyer traffic would be continuous throughout the year, even though "peaking" at seasonal markets and shows.

Mart Potentials

To test overall market potentials and specifically identify areas of prime opportunity for the Mart, surveys and analysis in four major areas were undertaken. These are as follows:

1. Analysis of the Regional Economy. Trends and outlook for the New England and Boston economies with special reference to wholesaling and distribution activities in key commodity groups were analyzed. Similar basic data were assembled and analyzed for other regions served by successful merchandise marts.

2. Analysis of Existing Marts. Although the Boston Mart as proposed is somewhat unique in its range and diversity, other marts and display centers serving similar functions were surveyed. Five major marts were analyzed in detail -- the Chicago Merchandise Mart, oldest and in many ways most successful among existing complexes; the more recent Atlanta and Charlotte marts; the Dallas Market Center; and the Denver Merchandise Mart. In addition, a number of other specialty trade marts and display centers were investigated. These included National Housing Center building products display in Washington, D.C.; New

York Architectural and Building Products Center; the projected New York Port Authority World Trade Center; the proposed Kansas City Apparel Mart; and other decorative, furniture and home furnishing com plexes in New York and Chicago.

3. Potential User Survey. A broad gauge mail survey covering more than 1,200 selected manufacturing and wholesaling firms was undertaken. Of these, 200 were drawn from the top 500 industrial firms in the nation, measured by gross sales volume in 1964. Approximately 850 mai lings were sent to manufacturing and wholesaling firms located in the six New England states. Firms selected were representative of 29 specific manufacturing and wholesaling categories. Another 215 survey forms were sent to manufacturers and wholesalers in the New York and New Jersey area, selected as a random sample. All of the mailings were sent to firms with gross sales of at least $1 million. The top 200 industrials were of course, substantially above this "minimum" level. These results have been tabulated and are set forth in subsequent paragraphs with full detail in Appendix tables at the back of this report.

4. Potential Boston Users. Extensive interviews with representatives of wholesale and distribution firms in furniture, home furnishings and decorative fields;men's, women's and children's apparel lines; shoe and leather industry; and building products manufacturers and users; among others were completed. In addition, interviews were also held with Boston retailers carrying selected merchandise lines. Findings on the proposed mart fully reflect results in these interviews.

The Boston area has not always been without a specialty center for permanent display facilities to serve its wholesale and distribution functions. Nor in fact, is the mart idea totally new as a concept for South Station development. However, a number of new factors directly bearing on mart potentials are now in hand. The most important among these are reviewed in the paragraphs below. Specifically,

the changing patterns of the New England economy and its wholesale markets are first analyzed. In addition, highlights in the surveys of existing marts and potential regional and local users are set forth. Finally, the unique possibilities of the South Station site; and specific recommendations for the proposed mart; scale and characteristics of its occupancies; overall sizing and staging and related management considerations are outlined.

New England Regional Market

A basic strength of the proposed mart is the scale of the New England market -- its population, its purchasing power, its retail and wholesale activity and growing requirements for goods. The present dimensions and growth pace in the market are substantial. The outlook for the New England economy as it relates to the proposed facility is strong and compares favorably to regional hinterland areas served by other established trade marts in the nation.

The six New England states -- Connecticut, Rhode Island, Massachusetts, New Hampshire, Vermont and Maine -- have a present population totaling more than 11 million persons. This figure is up approximately 650,000 from the level in 1960. Gains in the Sixties have been similar to those in the earlier decade when total population increased from 9.3 million to 10.5 million, a gain of nearly 13 percent and 1.2 million in the ten year period.

The largest concentration of population is in Massachusetts, which contains nearly half of the region's total, at 5.3 million persons in 1965. Connecticut is second in line with just under three million population, according to Census Bureau estimates. Maine and Rhode Island both fall in the 900,000 to one million range.

Retailing. This total population, coupled with high levels of personal income, supports and requires extensive retail activity in the region. Family median incomes in Massachusetts and Connecticut for example, were well over $6,000 and $6,800, respectively, in 1960. The scale of retailer activity is of direct interest here, as one indicator of wholesale and distribution requirements. In 1963, at the time of the most recent Census of Business, a total of more than $15 billion in retail sales were registered in the six state area. More than 100,000 establishments employing more than half a million workers were engaged in retail business.

In three key groups of retail activities -- general merchandise, apparel furniture and home furnishings -- the activity was also intense. General merchandise sales, dominated by the department store group, totaled nearly $1.8 billion. Apparel sales were just under $1 billion; and furniture and home furnishings sales reached the $626 million level. These figures were up across-the-boards from those recorded five years earlier in 1958. In the general merchandise group, the increase totaled approximately $500 million. Apparel gained by $80 million. In the furniture and home furnishings lines, the increase reached nearly $60 million.

As these volumes increased however, number of employees and establishments generally declined. The single exception was in the general merchandise group, where sales gains were so sharp that total employment increased during the period even though the ratio of sales to employment dropped.

Underlying these trends are a number of factors with specific implications for mart activities in the region. The declining number of establishments in the face of increasing sales points up the strong trend toward concentration of retail activities in a fewer number of larger units. The flexibility in choice of purchase point of these larger units is greater, and they are increasingly participating in central buying groups. However, these factors are offset by the growth of the regional markets and the increasing willingness and ability of manufacturers and distributors to provide expanded service and stocks closer to the point of ultimate consumption for retailers in the field. This is particularly evident in the apparel lines -- where regional differentials in "tastes" and merchandise needs tend to fragment "national" markets, and where frequent style changes during the course of the year create additional demands for goods display at the regional level.

Wholesale Operations. As in the case of retailing, wholesale sales have shown a 20-plus percent gain in sales in the five-year period between 1958 and 1963. The actual volume increase amounted to $3.1 billion going from $13.7 to $16.8 billion. Boston alone accounted for approximately one-half the region's sales, or $8.2 billion in all. Providence and Hartford, the region's second and

third ranked centers, recorded volumes only one-seventh as great as Boston's. In the national context, Boston ranked as the seventh largest wholesaling center in the U.S., behind San Francisco, Detroit and Philadelphia, each with volumes less than 25 percent greater. New York, Chicago and Los Angeles with sales at $57.6 billion, $23.7 and $17.1 billion, respectively, led the nation.

Although wholesaling activities bracket a broad range of specific commodities, apparel, furniture, home furnishings, building material and hardware lines are of particular interest in this analysis. New England patterns in recent years point up the scale of distribution activities in these lines.

In 1963, the region's volume of wholesale apparel sales reached more than $710 million, up from about $620 million in 1958 -- a gain of $90 million. Furniture and home furnishings sales added about $70 million, going from some $220 million in 1958 to more than $290 million in 1963. In the construction product lines, the rate of gain was even sharper and current level of activity is also very substantial. In 1963, total volume reported was $616 million as against $412 million in 1958. These figures, although directly measuring current wholesale activity and recent expansion patterns, cannot be directly compared to the retail sales trends for similar lines, because overlapping merchandise in varied store types obscure the retail sales levels actually realized in specific commodity lines.

Comparisons of New England and regional trade data for the areas tributary to the successful Chicago, Dallas and Atlanta marts point up the wholesale strengths of New England, especially in the specialized commodity groups. Key items of comparative data are summarized in the following tabulation:

	BOSTON N.E. Region	Chicago Midwest Region 1/	Dallas S.W. Region 2/	Atlanta S.E. Region 3/
A. 1965 Population 4/	11,159,000	27,891,000	19,556,000	13,624,000
B. 1963 Retail Sales 5/				
General Merchandise	$1.76	$4.61	$2.62	$1.80
Apparel	0.94	1.99	1.26	0.84
Furniture & Home Furnishings	0.63	1.55	0.25	0.72
All Other	11.76	29.56	18.03	12.07
Total	$15.09	$37.71	$22.16	$15.43
C. 1963 Wholesale Sales 5/				
Dry Goods & Appl.	$0.71 6/	$0.88	$0.40	$0.44
Furniture & Home Furnishings	0.29	0.90	0.37	0.41
All Other	15.82	53.36	26.37	18.13
Total	$16.82	$55.14	$27.14	$18.98

1/ Includes Michigan, Indiana, Illinois, Wisconsin
2/ Includes Texas, Louisiana, Arkansas, Oklahoma, New Mexico
3/ Includes Georgia, Florida, Alabama
4/ U.S. Census Bureau estimates
5/ Billions of dollars
6/ Excludes Vermont;(NA) data not available.

Existing Mart Experience

The scope and character of mart operations, as well as specific development and operational guides are best seen in trade marts presently underway. Five of the marts surveyed in the course of this analysis provide useful perspective for the proposed Boston mart. Including Chicago, Atlanta, Dallas, Charlotte and Denver, comments on each of these "reference marts" follow in the paragraphs below.

Chicago Merchandise Mart. Oldest of the existing marts, this immense and extraordinarily successful operation was opened in 1930. Owned by Joseph P. Kennedy since 1945, it was originally built by Marshall Field & Company. Marshall Field still maintains its sizeable contract furniture operation at the Mart.

The total building area is in excess of four million square feet. Reported to be the world's largest commercial building, it is second only in size to the Pentagon in Washington, exceeding the recent Pan Am building in New York among commercial structures as the largest in total area. The 18-story base is topped by a set-back 19th story and 6-story tower. Typical floor area is 217,000 square feet. The breakdown of building space is approximately as follows:

	Area (Square Feet)
Rentable Area:	
Merchandising & Commercial	2,100,000 sq. ft.
Office Area	1,000,000
Sub-total	(3,100,000)
Public and Utility Areas:	1,129,000
Building Total	4,229,000 sq. ft.

The dominant merchandise represented and largest proportion of available floor area is devoted to furniture, home furnishings and related accessories. Lines include floor covering; bedding; wooden furniture; fabrics and wall covering; lamps; juvenile furniture; housewares; gifts; glassware and china; silver; accessories; appliances and contract furniture and fixtures. Major portions of 11 floors in the 18 devoted to basic mart activities are in these lines. Apparel lines including men's and boy's, women's and children's cover the major portions of two additional floors. Miscellaneous lines also located on these merchandising floors include toys, games and wheeled goods. Offices and commercial services occupy most of the remaining five floors.

> No temporary space is available in the Mart. All lines are continuously on display in permanent showrooms as distinct from the booths typical of short-term show operations. Although virtually all of the spaces in the mart are manned on a year-round basis, activity concentrates at the seasonal markets which characterize activities in both furniture and apparel commodity groups. Displays, events and related activities at the Mart during these periods are coordinated with similar efforts at McCormick Place, Chicago's enormous new exhibition-assembly hall; other area display centers and at local hotels. Merchandise exhibited at the Mart is renewed at seasonal changeover points in preparation for the markets. We understand that most major U.S. furniture manufacturers introduce their new lines at the Chicago and High Point (North Carolina) markets.

Seasonal market activity is concentrated in the 22 individual markets held during the course of the year. The largest of these are in the January and June International Home Furnishings annual shows. Estimates of visiting buyer traffic

at these times totals 40,000. However, other markets together with daily visitor loads bring more than 500,000 buyers annually to the Mart from various sections of the nation as well as abroad, it is estimated.

Typically, some 4,300 individual manufacturer's lines are shown in the more than 900 showrooms. Tenants include manufacturers representatives, independent wholesaler and distributor organizations as well as manufacturers. The total employee count in the Mart is 20,000. The estimated visitor load each day adds another 20,000 to this basic figure.

The Mart sponsors intensive mail campaigns in connection with each of its numerous shows, as well as other events in the course of the year. These efforts are matched by individual tenants as well as trade associations in the building. Apart from direct mail advertising, the Mart sponsors an assortment of special events, programs and promotions to stimulate and maintain buyer interest and support its merchandising activities.

> Chicago has maintained a dominant national position over the years as a focal point in the furniture and home furnishings field, despite the fact that marketing patterns have substantially fragmented in recent years and a number of new merchandise marts featuring similar lines have been built elsewhere. Although this trend has resulted in some shrinkage of Chicago's national "draw", it has deepened its reach into the regional market and diversified the range of activities in which it specializes. This successful adaptation and continuous strength of the Mart operation are directly attributable to top management capability and commitment to sustained promotional programs.

Atlanta Mart. Occupying its present structure only in 1961, the Atlanta Mart contains one million square feet in a 23-story, $15 million structure on a strategic downtown site. This mart had previously operated only as a "show" unit in temporary quarters in an existing garage building at the eastern edge of the downtown. The first garage show was held in 1945 in 24,000 square feet of rented space. Continuing expansion in the years following 1945 -- drawing in a large measure on strong decentralization trends in the nation's wholesaling activities -- led to the development of the present permanent Mart building.

At the time of opening in mid-1961, 65 percent of the total rentable floor area in the new building was leased. Although the previous show operations were oriented directly to furniture wholesalers, with the new permanent space, additional lines were added to cover a full range of furniture and home furnishings commodities, floor coverings, gifts, apparel and household accessories. Today, the Atlanta Mart offers one of the most extensive displays of these commodities in the nation.

The principal strength of the mart still is in furniture and home furnishings. Twelve of its floors are occupied by these lines. Gift lines are on two floors. At present, men's, women's and children's apparel is spread over approximately three full floors. In addition, one floor of office space, principally in professional occupancies, is in use. Restaurant units, retail and other commercial areas are on both the first as well as top of the Mart levels. Finally, two levels containing

nearly 90,000 square feet are available for temporary show facilities for a variety of special events taking place during the course of the year, including the boat show, music show, golf show as well as marketing events.

Although all space other than the two show levels is in permanent showrooms, occupied on a long term lease basis, a relatively smaller proportion of the space is manned continuously year-round in contrast to the Chicago operation. Some areas are manned on "trade" days once a week or periodically by appointment; other space serves as headquarters for the organizations involved and is open for regular business hours; and still other areas are open only at the seasonal markets.

As in other marts, peak activity centers around the major shows. The week-long events in January and July draw an estimated 10,000 to 15,000 buyers. Daily activity has been increasing however, and at the present time an estimated 200 buyers visit the 500-plus establishments in the mart, representing lines for more than 1,000 firms. In all, an estimated 100,000 buyers visit the mart annually both at show times as well as during the course of everyday activity.

The mart management is heavily involved in market promotional activities. As in the case of Chicago, a broad assortment of direct mail pieces are sent to thousands of buyers, retail outlets and other organizations in the mart region. These advertising and promotional activities are basic to the success of the 11 apparel and other shows held annually at the mart.

A major expansion is now projected for the mart. An additional one million square feet -- doubling the size of the existing facility -- is moving into construction at the rear of the present mart building. Chief emphasis in the new area will be in apparel lines as distinct from home furnishings. In addition to new permanent showroom space, the temporary exhibit and show facilities on the lower floors will also be expanded.

Dallas Mart. Apart from Chicago among the marts surveyed, Dallas offers the most extensive display area and combination of activities. A total of more than 2,750,000 square feet in five separate buildings are included in the market center which makes up the Dallas complex. These five buildings have been developed over a period of about eight years.

Individual buildings, year completed, space provided and major functions are as listed in the following tabulation:

Market Building	Year Completed	Area (sq. ft.)	Major Function
1. Decorative center	1956	130,000	Furniture & home furnishings
2. Home furnishings mart	1957	438,000	Furniture & home furnishings
3. Trade mart	1959	968,000	Furniture & home furnishings; gifts; toys; jewelry; & accessories
4. Market hall	1963	212,000	Special events, temporary exhibits and shows
5. Apparel mart	1964	1,023,000	Apparel; accessories
	Total	2,771,000	

In addition to the already completed facilities, it is reported that two other types of building units are under consideration for the market center. A medium-size auditorium facility with permanent seating as well as a world trade and travel center, providing office space for international trade and commerce activities; exhibition areas for display of specialty imports; promotional material on travel and vacation opportunities and similar activities are specific possibilities.

The market center complex is located on a major freeway several minutes west from the downtown area. Buildings are arranged in campus style to provide extensive surface parking adjacent to the relatively low, sprawling buildings making up the complex. Elaborate landscaping and other special decorative features are provided to create an attractive setting for the entire development. Supporting commercial facilities including restaurants are also available on the site. Although no transient accommodations are available on the site of the market center itself, a number of motor hotels and motels in the immediate vicinity effectively meet this need.

Most of the 1,400-plus showrooms provided in the mart buildings -- excepting the market hall facilities -- are available only on a permanent basis. The market hall facility, as indicated above, is oriented directly to temporary markets as well as special events. As in the case of other marts, activity at the

center peaks at seasonal shows. In addition, relatively continuous buying activity takes place throughout the year although on a less intensive basis. The commitment to promote this center's markets parallels that in Chicago and Atlanta. Although the promotional specifics at each mart vary, because the Dallas and Atlanta marts are under substantially the same ownership, their overall programs are similar.

Charlotte Mart. A smaller mart, opened in 1961, this facility has been less successful than the three dominant marts discussed above, up to the present time. A total of 245,000 square feet are provided in the building. Of this, 165,000 is designed for permanent showrooms and office space. An additional area of 80,000 located on the ground floor is allocated to temporary showroom space for special exhibits and shows.

Attempting to specialize in the apparel and textile fields, the present occupancy level in the permanent display and office areas is about 85 percent, or 135,000 square feet. The occupancy pattern is mixed, with more than 75 percent of the total occupied area actually in the apparel and textile fields. The remaining 30,000 square feet -- 25 percent of the occupied area -- is in scattered uses with emphasis in home builders' supplies, appliances and miscellaneous manufacturers' representatives as well as general office uses.

The mart management at the present time is oriented primarily to the operation of the mart facility as a real estate rather than a marketing enterprise. The management restricts its promotional activities to a quarterly newspaper and a directory. The principal market-making activity is a function of tenant groups, consisting of independent salesmen and sales representatives. These groups sponsor about 10 shows in the course of the year at present. In addition, more than 15 other shows in such fields as gifts, jewelry, textile manufacturers' equipment and plant maintenance equipment also occur annually.

The trade area served by the Charlotte mart concentrates in an area within 75 miles of Charlotte, containing a population of about two million. In total, the mart attracts nearly 60,000 buyers annually, including representatives of some 2,000 stores in the Carolinas, Virginia, Tennessee, Georgia and Florida -- with a few buyers from as far as Kentucky and the Bahamas.

> While Charlotte is the dominant wholesaling center in the Carolinas and Virginia, important sub-centers including Richmond, Norfolk, Raleigh, Greensboro and Winston Salem, Greenville, Columbia and Charleston, lessen Charlotte's control over the market area. Although located at the edge of this trading area, Atlanta exerts major wholesale dominance throughout the entire South Atlantic region. Washington-Baltimore on the northern end as well as Philadelphia and New York even farther to the north, also influence Charlotte patterns. This combination of factors -- restricted markets, intensive competition from other locations and finally, the mart's approach to marketing operations -- are primarily responsible for the limited reach and impact of this mart.

Denver Merchandise Mart. The Denver facility serves a trade area which reaches into 13 states. Extent of area notwithstanding, the population of this entire market area is less than four million. Key competitive sub-centers within and adjacent to the area include Dallas, Chicago, Los Angeles, San Francisco and Minneapolis.

The mart, which opened less than a year ago, presently shows an occupancy of about 50 percent. Total area for permanent showrooms in the building is 257,000 square feet. An additional 50,000 square feet are provided for temporary space devoted to exhibits, special events and shows. Principal tenancies are in apparel, home furnishings, gifts and jewelry. The mart contains a restaurant and a spacious central court area.

As with the Dallas operation, the management of the Denver Mart undertakes a broad range of promotional activities in behalf of its shows. Included is the publication of a magazine and extensive mailing of flyers and other promotional materials. At present, a total of about 15 shows are held throughout the course of the year. These attract attendance levels in the 55,000 to 60,000 range, with buyers averaging four days stay. The region is served by about 400 apparel salesmen and nearly 100 furniture salesmen. The marketing impact of the Denver mart appears limited principally by the small scale and dispersed tributary area it serves.

Proposed Mart Program

Based on results of our analysis, we find strong and specific development potentials for the proposed Trade Mart at South Station. New England, and Boston in particular, is one of the nation's top wholesaling sub-markets. Recent trends and future outlook in the region's wholesaling and distribution activities support the specific potentials and in turn, can be strengthened by modern merchandising facilities such as are proposed in the Mart. Boston mart development opportunities compare favorably to key factors affecting successful mart facilities elsewhere. Finally, responses to direct mail survey covering some 1,200 major New England and U.S. firms active in a variety of fields and specific Boston tenant prospects at present would provide a basis for active and strong lease potentials at the Mart.

> We would recommend that total mart development be planned in two stages. The initial construction should provide rentable floor space of approximately 400,000 square feet and a gross area of 480,000 square feet. A second stage containing another 450,000 to 600,000 gross square feet should also be planned. The specific timing of the second stage should be set in terms of actual operating experience in the first stage. Potentials for first stage development are current. Accordingly, mart development timing should be set in relation to technical renewal, engineering and construction considerations at South Station. However, mart development should be directly coordinated with other related and supporting elements in the proposed complex.

The occupancy pattern for first stage development would fall in four major classifications. Each major occupancy group would be approximately equal in terms of the total square footage they are expected to require. The four groupings would be in apparel, furniture and home furnishings, housewares and related fields; and miscellaneous commodities activities. More specifically, the listing of key activities in each occupancy group can be set forth as follows:

Activity	Net Occupancy Stage I
Group I. Apparel	
Men's and Boy's	
Women's wear	
Children's wear	
Furnishings & Miscellaneous	
Shoes and Leather	
Trade Association Offices	
Sub-total	100,000 sq. ft.
Group II. Furniture & Home Furnishings	
Fabrics	
Wallpaper and Paint	
Floor Coverings	
Upholstered Furniture	
Bedding and Sleepware	
Wooden Furniture	
Casual: Lawn & Garden Furniture	
Lamps	
Accessories & Miscellaneous	
Office Furniture	
Contract Furniture & Equipment	
Trade Association Offices	
Sub-total	100,000

Group III. Housewares & Related Lines

Hardware	
Kitchen Ware	
Kitchen Equipment	
Appliances: Large and Small	
Plumbing & Heating Equipment & Fixtures	
Sub-total	100,000 sq.ft.

Group IV. Miscellaneous Commodities & Activities

Gifts	
Toys	
Sporting & Wheeled Goods	
Stationery and Office Supplies	
Institutional Display:	
Industrial Products	
Building Materials, Equipment & Architectural Products	
Tourist and New England Travel Activities	
Regional Promotional & Economic Development Displays	
Reserve Areas and Assembly	
Sub-total	100,000
TOTAL	400,000 square feet

Based on an allocation of 40,000 to 50,000 square feet per floor as previously discussed, first stage development would provide for a total of about ten floors. Second stage development could occur either as a vertical extension of the first stage building or horizontal expansion in a second adjacent structure, physically connected to the first building at one or more levels.

All upper floors in the first stage development could be identical in basic layout, although providing flexibly for showroom space and partitioning with corridor access to all sections of each floor.

Institutional display facilities should be located at the lobby and entry level. These displays would be serviced by central information and attendant facilities for each of major product or activity grouping, as described previously. The lobby floor should be directly accessible from the main concourse serving the transportation and other facilities provided in the Trade and Transportation Center. A key value in the institutional display will be its accessibility and visibility to the major traffic flows passing through the complex. In addition, the interest generated by these displays should serve to make the concourse areas more active and attractive for the users of the center.

Finally, the linkage between the proposed hotel and trade mart must be convenient and direct. A layout with the first stage mart development providing a base for the hotel tower -- and the second stage mart structure horizontally adjacent to the first -- could provide an optimum circulation arrangement. On this basis, not only would all transient accommodations of the hotel be directly available to mart users and visitors, but its catering facilities, banquet areas, meeting rooms and exhibition areas would serve to directly support and be supported by the merchandise mart.

Specific Mart Potentials

Each major commodity line group identified as offering occupancy potentials in the proposed mart has been specifically evaluated in the Boston market. Extensive interviews with organizations and firms active in Boston as well as mail

survey of representative firms headquartered in New England and nearby areas have gauged these potentials. The key items background to our findings are summarized in the paragraphs which follow.

Apparel Group. New England marketing in apparel and shoe lines is through sales representatives -- both independent and direct factory representatives, many with territorial "franchises" -- jobbers, wholesalers, and dealers. Independent sales agents, representing one or several compatible lines, are numerous in the region, particularly in the garment fields. Four prominent groups have been organized for the New England apparel market and represent the area sales people. These are the Women's Apparel Club; the Men's and Boy's Apparel Club of New England; the United Boston Children's Wear Show; and the New England Apparel Traveler's Association. These groups have functioned to make "markets" through shows in the Boston area and in selected other New England areas. Even apart from the organized and periodic showings to buyer groups, many members of these organizations as individuals, with or without the support of the producers they represent, utilize Boston office and display space for their lines on a permanent, year-round basis.

Total membership in the four organizations we understand, is approximately 1,200. Based on interviews with key representatives of each organization, it appears that many of the local sellers operate from their homes and spend much

of their time traveling throughout the New England territory. Of those occupying commercial space for office, display and related purposes however, a portion could definitely be attracted to a centrally-located, specialized facility catering specifically to their needs in a modern, attractive structure available at suitable and competitive rentals. Specifically, based on our interviews, we believe that some 75 independent sales agents could be attracted to the proposed mart together with representative lines in the garment group as part of the Stage I development. This potential could be enhanced were the respective trade associations also to locate at the Mart.

In the shoe field, the New England Shoe and Leather Association is the major trade factor in market-making activity and speaks for the industry in the Boston area. Here, as in the case of apparel, we believe there is definite potential for a variety of occupant-types in this industry at the wholesale, manufacturing and distribution levels.

> Responses to the mail survey support conclusions with respect to these fields and the potentials identified for the proposed mart. In the textile and apparel lines for example, approximately 20 percent of responding organizations indicate specific interest in Trade Mart utilization for sales and exhibition purposes. The favorable response in the shoe and leather lines was even stronger.

Accordingly, it is our judgment that an allocation of approximately 100,000 square feet is appropriate and supportable for garment, shoe and accessories in the

light of specific Boston prospects. This figure reflects first stage potentials only. We believe the actual operation of the Mart during its initial years will generate the basis for a sizeable subsequent expansion with major additional representation in these apparel fields.

Furniture and Home Furnishings. As in the case of apparel, the marketing pattern for New England in this commodity group is complex. Specifically involved are the producers; their independent sales representatives, most with territorial protection; factory representatives; wholesalers; and dealers. Each of these levels in the marketing system offers potentials for occupancy at the proposed mart. In addition, firms in each of the specialized lines within the overall field offer potentials for occupancy at the mart. The range of these specialized lines were identified in the listing previously set forth.

In the course of analysis, representatives in a variety of furniture and home furnishings lines were interviewed. In addition, individuals and organizations knowledgeable in marketing patterns in New England for these commodity lines were contacted. Among independent sales representatives, the New England Furniture Agent's Association with approximately 500 active members, generating total business reported at $100 million annually, is a key force. This group is heavily represented at the principal show held in Boston and produced by Boston Furniture Shows, Inc.

A number of the salesmen participating in the Association require and utilize display space and would be potential occupants at the proposed mart. In addition representation from the area wholesalers, although limited in number, could be significant in terms of floor area. Finally, manufacturers in the key individual lines would offer major potentials, in line with the experience at other marts elsewhere in the nation, and as distinct from the apparel group where wholesalers and sales representatives would be expected to dominate. The Dallas experience for example, is that 90 percent of the furniture and furnishings occupancies are manufacturers and that only 20 percent of the apparel occupants are so classed. This pattern prevails despite the fact that apparel manufacturers outnumber furniture producers nearly four to one nationally.

The availability of a new facility as proposed could assist in "creating" a market for space of this type. As furniture manufacturing and distribution organization structure and re-structure regional patterns of distribution and sales activities, the availability of a strong regional market focus and specialized mart facility could be decisive in influencing the selection of Boston as regional headquarters.

> Mail survey responses favorable to the proposed mart from furniture and fixture manufacturers were numerous and high in percentage terms. Approximately three-fourths of all manufacturers responding indicated specific interest in occupancy for their firms in the proposed mart. Based on Boston area interviews, analysis of regional market potentials and mail response, we believe that 100,000 square feet

allocated to furniture and home furnishings could be successfully leased at the South Station mart location in the period ahead.

Housewares and Related Lines. The pattern of wholesaling and direct producer marketing appears stronger in this field than in the apparel and also the furniture lines discussed above. Accordingly, the principal occupancy potentials for space in this commodity group would be from among manufacturers, wholesalers and jobbers, especially those handling multiple lines. Interviews with organizations and individuals presently active in these fields in Boston, together with mail survey responses -- more limited in these fields than in previous cases -- clearly indicates a substantial potential for display and marketing activities in these commodities. We believe that 100,000 square feet of floor area for this group could be readily filled even from among wholesalers and manufacturers of hardware, kitchenware and equipment, appliances, plumbing and heating equipment in the New England area alone, apart from the numerous, giant manufacturing organizations marketing their goods in these fields throughout the New England states.

Miscellaneous Commodities and Activities. A group of additional commodity lines offer specific opportunities based on the scale and extent of their wholesaling and distribution activity in Boston and New England areas at the present time. These include the gift; toy; sporting goods; and stationery and office supply groups. Although the occupancy potential of these additional items is

relatively small in relation to the other commodity groups discussed previously, they represent an important supplement and "rounding" of the lines represented at the mart. Accordingly, occupancies in these groups should definitely be solicited as part of an overall leasing program.

A number of institutional-type displays can appropriately be represented in the mart. These would include a broad variety of industrial products not represented elsewhere in the mart ranging from machine tools to automobiles; and building materials, equipment, and architectural products. Specific potentials for this type of display were pinpointed during our analysis by interview and mail survey. In addition, tour and travel services and exhibitions with specific reference to the New England area; and promotional displays related primarily to regional institutions and economic development sponsored by organizations and associations -- including rail and airlines; major utilities; trade associations; regional, state and local development agencies; industrial development units; tourist and recreation promotional groups; chambers of commerce; and the MPA itself -- offer a potential for display areas with broad exposure to public groups.

As previously mentioned, the location for these institutional displays should be at the entry lobby level adjacent to main concourse areas for the trade and transportation complex and the pedestrian focal point. These displays, not manned by the organizations represented, would be exhibited on open floor areas in prepared booths and in free-standing cases, serviced centrally from reception points in the mart lobby area.

In the case of building materials and architectural products, specific marketing functions could be served for the trade with benefits to both producer and consumer. At present in the Boston area, no location provides a complete display in a variety of building and construction-related products for use by architects, builders, property owners and other potential "consumers." Permanent exhibitions of this type successfully operate in New York City at Park Avenue and 42nd Street; in Washington at the National Housing Center; and in the Atlanta Architectural Center. Interviews with architects and other professionals in Boston's building industry as well as with potential exhibitors indicate favorable potentials for such a display center.

Finally, reserve area and assembly facilities would be useful as an adjunct to mart operations to support flexibility in mart occupancy patterns as well as for direct use in special events, clinics, seminars and similar activities. In total, we believe that 100,000 square feet of space recommended for allocation to this group of occupancies would be appropriate and could be effectively leased for the first stage mart development.

* * * * *

Total net floor space occupied in Stage I by the activities indicated would be 400,000 square feet. This area would be expanded to some 480,000 square feet or more on a gross basis, taking into account corridors and other non-rentable areas, depending on the final design, layout and efficiency of the building.

Management Factors

Two key factors, mentioned briefly in previous paragraphs, should be reiterated at this point -- the leasing program and its timing; and the role of promotional activities in the operation of the trade mart. Each of these is discussed briefly in further detail below:

1. Leasing and Pre-Leasing. Mart tenancies in selected activity groupings and specialized occupancy types can and definitely should be committed at an early stage in detailed planning for the structure. The program for pre-leasing key mart areas should parallel the pattern in many major office buildings and in shopping center leasing where key tenants are secured initially. Such tenants not only account for meaningful fractions of total space available, but also help attract additional tenants.

   Specifically, early discussions with the key apparel group associations mentioned above, would be useful. Support and participation by these organizations and their membership in the mart program could be an important ingredient in fulfilling the marketing role and realizing potentials available to the mart in these commodity lines. Because mart focus is year-round occupancies, and the principal activities of some associations relate to their seasonal shows, should firm commitments from these groups not be obtainable, we believe other tenant sources within the trade could be successfully secured and the scale of development recommended here could be achieved. In contrast to apparel, in the case of furniture and home furnishings lines; housewares and related fields; institutional display areas and miscellaneous commodity groupings, contact would center on individual major organizations in various fields.

2. Promotional Activities. As pointed out earlier in this paper, mart operations is an enterprise as much as it is a real estate venture. Accordingly just as in hotels, skillful programming and specialized management are key ingredients to success in Boston mart development. Specific devices and programs to promote mart activities and representative commodity groups have been discussed in detail earlier.

In responding to the requirements for mart management, there are two basic alternatives available to the Port Authority. One would be to develop a specialized staff capable in these matters and with specific experience in both creating and successfully operating a trade mart. A second alternative would be to enter a management contract or leasing arrangement with an organization committed to mart operations as a regular business activity and with a demonstrated record of performance along these lines.

In the course of our mart survey, we identified a number of organizations who might be interested in a Boston program. In a broad sense, arrangements with such firms would be similar to hotel management agreements. One additional factor appears to be operating here, however. Because present interest of a number of mart management organizations is directly related to real estate and its particular tax features, it would appear necessary to tie ownership of completed property improvements to management. Suitable under these circumstances, would be a ground or air rights lease under which mart management would own as well as operate the facility. Regardless of the choice between the alternatives to be used by MPA, it is essential to recognize the need to commit to an extensive marketing and promotional enterprise as a part of proposed mart operation.

TRADE AND TRANSPORTATION CENTER

ANALYSIS OF SOUTH STATION DEVELOPMENT POTENTIALS

Section 4. Motor Hotel

In this section, results in our analysis of potentials for a motor hotel in the projected South Station trade and transportation complex are summarized. Principal findings are as follows:

- Three factors provide major supports for a South Station motor hotel. These are: 1) outstanding accessibility for motor vehicles via the Massachusetts Turnpike Extension and Fitzgerald (central artery)Expressway; 2) marked deficiencies in first class modern transient accommodations proximate to the downtown commercial core; and 3) complementary activities anticipated in the projected trade and transportation complex at South Station.

- Strong market potentials are indicated for up to a 500 room facility at this location based on analysis of trends in Boston hotel markets; location of competitive hotels in the central business district; and demand for overnight rooms anticipated from the prospective South Station trade mart and accessory activities.

- Optimum development timing for a South Station hotel would follow probable schedules for other key project elements, with initial offering possible in mid-1969 based on site disposition in 1966 and construction beginning by late 1967.

- Operation of the South Station facility by an established hotel organization is recommended. Highly specialized character of

hotel operations; day-to-day management concerns; pre-booking and promotional values for transient occupancy as well as convention business development all suggest this as an appropriate course for the Port Authority.

Key Market Factors

Accessibility, strategic downtown deficiencies and complementary activities programmed for the South Station project would provide major market supports for the projected South Station hotel.

Accessibility

Located at the junction of the Massachusetts Turnpike Extension and the John F. Fitzgerald Expressway, the South Station site is directly accessible by automobile to principal highways in the Greater Boston transportation system. New England and mid-Atlantic travelers destined for downtown Boston via major expressways would literally arrive at the doorstep of the projected South Station complex. Ample and convenient hotel parking would be provided directly upon leaving these high speed roadways reducing circulation inconveniences on city streets to a minimum.

No downtown Boston hotel presently combines maximum accessibility features potentially available at South Station. Travelers arriving by air, rail and bus transportation would also be delivered directly to this site or convenient to it by a short taxi ride. South Station's strategic location in downtown Boston's transportation pattern would be a distinct competitive advantage for a prospective hotel at this location.

Downtown Deficiencies

With the exception of the Statler Hilton, no first-class, modern hotel is now located in downtown Boston east of Copley Square. Several older facilities including Parker House, Hotel Bradford and Hotel Touraine have served Boston's commercial core in the past, but have lost appreciable ground to competitive facilities in recent years. Although relatively distant from downtown retail and office concentrations at Washington Street and Post Office Square, respectively, the Statler Hilton has functioned as the major CBD hotel prior to the opening of the new Sheraton Boston in April 1965. Competition between these two hotels for "downtown" business and other market sectors is keen, but the most significant implication is extension of Boston's first class complement of hotels away from the downtown core in the direction of the Prudential Center.

While the "center of gravity" of Boston's commercial activities have progressively shifted to the west following construction of the John Hancock office tower at Berkeley Street and the now completed Prudential Tower along Huntington Avenue, an appreciable proportion of Boston's office activities remain in the older downtown section delineated by the central artery and the district east of the Common. Recent additions, continued renovations and plans for new construction will further strengthen this core area. The State Street Bank building at Pearl and High streets, Traveler's Insurance Company building on High Street, and a projected First National Bank Building are among the major structures leading to this revitalization.

> Continued upgrading of Boston offices in the core area and anticipated gains in retail activity extending out from the city's 100 percent location at Washington and Summer Streets in the direction of South Station, will continue to generate a major flow of out-of-town business visitors. In the absence of first-class, nearby accommodations, these travelers are likely to seek rooms in peripheral CBD hostelries. Deficiencies in the supply of modern facilities within convenient walking distance of downtown Boston's commercial core we believe, should place a prospective South Station hotel in an excellent position to capture a large share of business visitors to this area. This strategic location coupled with ease of access by automobile, railroad and a short journey from the Logan Airport would further strengthen the competitive position of a South Station hotel, in our judgment.

At the present time four hotels containing up to a total of 1,200 rooms are projected for peripheral downtown locations. Only one of these can now be considered firm however. This is the Heritage House at Charles and Boylston Streets which will be constructed within the next year. Plans for a government center hotel, waterfront motel and one in the West End renewal area, close to Massachusetts General Hospital, are less firm, lacking specific developer commitments. Since no new hotels are proposed for the central business district renewal area according to our information, the prospective South Station site is one of the closest locations to Boston's commercial core available for a new, first class facility.

Complementary Activities

A third sector from which a prospective South Station hotel would gain significant support would be complementary activities projected for the South Station

complex. Most notable among these is the prospective Trade Mart generating many business visitors, a high proportion of which would require overnight accommodations. The scale and character of this facility was discussed in detail in an earlier section of this report. In addition to markets for transient rooms, meetings and conferences for Trade Mart tenants, the specialized trade activities headquartered in the South Station office tower would require a wide range of public meeting rooms and banquet facilities. In overall programming for the Trade and Transportation Center, all significant functions of this type have been reserved for the motor hotel.

Recent Boston Trends

Boston hotel trends have followed patterns for many United States cities in recent years, with occupancies showing steady declines in the face of suburban motor hotel competition. Declines have been particularly sharp in the older downtown facilities which lack adequate parking to meet increasing demands for such facilities and character of accommodation. In addition, poor overall downtown conditions and increased traffic congestion have frequently compounded problems for downtown hostelries.

> Indications are that locational patterns for the nation's hotel industry are undergoing appreciable change relative to trends for the 1950's. Previously passed over in favor of suburban sites, downtown areas are now selected for modern, first class motels and motor hotels. Reverses in past trends have been enhanced further by the construction of modern expressways linking downtown areas directly with the interstate system and by-

passing congested city arteries. The success of the Sheraton Boston illustrates the basic change in hotel markets which has taken place in major cities throughout the nation.

Directly accessible to the Massachusetts Turnpike Extension and Huntington Avenue, business and vacation travelers seeking first class accommodations in downtown Boston quickly responded to the new Sheraton Boston. Occupancies at this hotel have been well in excess of general levels reported by leading city and area hotel facilities, averaging in the 85 percent range, according to our information. Basic strengths in the Sheraton Boston's operation have included the deficiencies in existing city accommodations, modern conveniences and facilities catering to current travel preferences in the hotel itself,as well as the market generated by activity at the adjacent War Memorial Auditorium and Exhibition Hall. Similar strong market response is reputed at the Charterhouse,also relatively new, located in Cambridge nearest the downtown just over the Longfellow Bridge.

Overall trends in the metropolitan area's transient market have been up in recent years. Between 1958 and 1963, the most recent year for which comprehensive data are available, the number of hotels, motels, tourist courts and camps with payroll increased by 33, extending the longer term net gain rate of six or seven per year. More important however, was the increase in receipts for these establishments -- from $55 million in 1958 to $68 million in 1963. This $13 million

gain represented nearly a 25 percent climb in the five-year period. The overwhelming proportion -- approximately 75 percent -- of the region's receipts were realized in the city of Boston.

> Boston room occupancy patterns are significantly above the average for the nation as a whole, even accounting the effect of recent increases in availability of modern accommodations. A sampling of some 5,500 rooms in 15-17 mixed, but generally older structures, shows about a three percent decline from 1961 through 1964. Current average occupancy levels appear to be in the 65 percent range.

The recent addition of the approximately 1,000 rooms at the Sheraton Boston plus more than 500 at the Fenway, Midtown and Charterhouse Cambridge has had the effect of increasing total occupancy in the area, but against a substantially enlarged overall room count. The potential is for the occupancy figure to increase again however, with future growth in total demand and as the benefits of the Auditorium take full effect.

Development Guidelines

Three major elements related to prospective development of a motor hotel at the South Station location are discussed in the paragraphs which follow. These include hotel size; development timetable; and overall hotel operation.

Hotel Size

Based on analysis of recent and projected Boston hotel markets, location of competitive facilities and anticipated patronage generated by complementary South

Station activities, we believe this site would support a first class motor hotel ranging up to 500 rooms in size. In addition, a variety of public facilities including restaurant, meeting rooms, major ballroom and other facilities should be included and in our judgment, could be profitably operated here, especially with the support of the proposed Trade Mart at this location.

> Our recommendations for total hotel size take into account the volume of business trips generated by downtown commercial establishments and recent hotel room additions to the metropolitan supply in close-in areas to the central business district. Based on field surveys, occupancy levels at existing hostelries, and the distribution of downtown's present supply, we believe the prospective South Station hotel will cater primarily to business travelers destined to the downtown area and to commercial activities anticipated at South Station itself. In addition, an appreciable proportion of through-travelers and other visitors to the Boston area can be expected to be attracted to this facility. Final determination on the "orientation" and type of hotel to be built, desirably made in conjunction with possible operators, will fix the optimum size. This point is discussed in further detail below.

Development Timing

Market potentials at South Station to support the proposed motor hotel noted in the foregoing paragraphs, are already available or will be in place during the next four to five years in our judgment. Key support factors related to site location, accessibility and hotel deficiencies in downtown Boston already exist and will likely take on increasing importance in the foreseeable future. Demand for transient accommodations, generated by complementary activities in the South Station complex will begin to materialize by 1970, according to our calculations.

> Scheduled development of the South Station Trade and Transportation Center will be directly contingent on a timetable imposed by the renewal process. At the earliest, it appears that disposition of the South Station site would take place during 1966, and initial construction of various project elements would begin during 1967. Initial offerings for the prospective hotel, first stage of the trade mart, and office tower could be expected no earlier than mid-to-late 1969, we estimate.

The projected hotel should go forward as one of the early elements of the South Station venture. This facility would thus be available promptly to meet the commercial core as well as the trade and transportation center demand.

Hotel Management

Owing to complexities of present-day hotel operations, we recommend that the Authority enter a lease or management agreement with a nationally established hotel organization in order to gain maximum benefits from this development. The wide range of specialized activities including restaurant operations, promotion of conventions and meetings, utilization of public rooms, rentals of private rooms and a host of other activities requires a skilled, professional management to optimize business potentials afforded by the South Station location.

Apart from bringing management, organizational and financial resources to bear on the specific prospects available by the proposed facility, a nationwide hotel organization would be in a position to promote additional business opportunities not available to smaller concerns. These would include advance bookings, room reser-

vation services in major cities, specialized attention in arranging major national and regional meetings seeking a Boston outlet, and a variety of other services necessary to the successful promotion of hotel business. Prospects for successful operation at the South Station hotel would be definitely enhanced with this additional market "leverage".

As noted earlier, final determination of the ultimate size of the South Station hotel should be coordinated with prospective lessees. Knowledgeable in the requirements of their own operation and optimum "packaging" of all services and facilities, specific operators may select a larger or smaller hotel for more effective marketing and management from the standpoint of their particular type of operation.

TRADE AND TRANSPORTATION CENTER

ANALYSIS OF SOUTH STATION DEVELOPMENT POTENTIALS

Section 5. Special Uses

In addition to major elements of the trade and transportation center, potentials for which are dealt with in other parts of this report, a number of additional special components were identified at the outset. Results of our analysis for these special uses are set forth in the paragraphs which follow. Included are the following items:

1. Railroad terminal and related facilities
2. Bus terminal facilities; intercity and suburban bus operations
3. Heliport facilities
4. Downtown-airport ground transportation services
5. Rapid transit facilities
6. Retail sales and miscellaneous services
7. Special traffic, circulation, taxi and vehicular servicing facilities
8. Post office depot
9. Truck terminal and related facilities

Rail Terminal Facilities

Three basic use requirements have been identified for railroad service at South Station -- a condition of site disposition as set by BRA. These

include: operating facilities; service facilities; and administrative office areas. Each of these functions is briefly analyzed below.

Operating Facilities. Continued utilization of railroad trackage and attendant facilities (i.e., signals, yard facilities, platform areas, etc.) is the major item under this heading. According to our understanding, the purchase agreement concluded between BRA and the Boston Terminal Corporation, makes available 17 tracks into South Station. Air rights over these tracks will be sold for the development of parking areas.

Pending resolution of rail passenger service to this facility, a program has been formulated for retiring selected trackage from Summer Street to the Post Office annex on Dorchester Street. Under this agreement, a series of five parcels have been delineated containing from two to four tracks each. In the event passenger service to the station is discontinued -- as currently requested by a New Haven application to the Interstate Commerce Commission -- all but two tracks might be retired. The remaining tracks, adjacent to the South Station Postal Annex, will be kept open for rail access to that facility. Should any or all of the other trackage be retired, space freed would become available for alternative uses, we understand.

Service Facilities. Included here would be waiting room and lounge areas, ticketing space and baggage room facilities serving railroad passengers. Under

agreements between BRA and the South Station Terminal Corporation, a total of 25,000 square feet of space would be made available to the corporation for these purposes. This space likely would be located on Disposition Parcel A, with reasonable access to Summer Street and the proposed Dewey Square pedestrian bridge. In the event a bus terminal is also established at South Station (see below), a joint concourse-waiting room facility might be designed for railroad and bus passengers. Other Center functions and main circulation features could also be related to this concourse area.

According to the sale instruments drawn between the BRA and Terminal Corporation, a specific obligation will be placed on the developer to lease terminal space to the railroad, should it so elect. The formula set under this agreement provides that the railroad will be required to pay a "fair" rental based on operating costs related to facilities in the present South Station Terminal. Final rental established for this space therefore, will not necessarily relate to development costs for new space and return on investment, as we now understand the terms of this arrangement.

> Since this arrangement potentially places financial burden on the project, we would recommend that some limit on the developer obligation to the railroad be established and that financial relief be obtained through the disposition price of land to the extent possible. At present there is no indication of what will constitute a "fair" rental for the new terminal space, based on this formula since the data to establish this level have yet to be collected. These will be in hand in about one year, following the analysis of operating results based on bookkeeping procedures initiated in July of 1965.

Administrative Offices. As noted previously in connection with the special office analysis, a considerable floor area will be required by the New York Central and New Haven Railroads to house administrative functions in the area. A total of 25,000 square feet of space has been estimated as potentially required by the two lines -- 20,000 for the New Haven and 5,000 for New York Central. This area is somewhat less than the total now in use in present, relatively inefficient layouts.

Bus Terminal Operations

Suburban and intercity bus systems destined to central business district locations have been analyzed as prospective tenants of a South Station transportation terminal. Specific potentials for these uses are summarized in the following paragraphs.

Suburban Buses. Commutation to downtown Boston via suburban buses in recent years has paralleled declines in patronage on all of the public transportation systems. Despite these downtrends numerous bus routes still radiate from the CBD. As with all of the transportation system, the loads focus on downtown Boston at the morning peak and reverse during the evening peaks. The southside routes are relatively less extensive in contrast to others, however. The westside routes are strong and to the degree that these terminals can appropriately be shifted toward South Station, those suburban lines could be effectively served.

While several terminals in the central area are utilized for commuter buses, Greyhound and Trailways facilities in Park Square are of principal importance. Plymouth and Brockton; Shortline; Graylines; Michaud; Vermont Transit; and Englander Coach Lines share use of the Greyhound terminal. Almeida; Peter Pan; Eastern Massachusetts Railway Company; and Boston and Worcester (B&W) are prime tenants at the Trailways terminal.

Between 80 and 100 "in and out" bus trips are counted in each of these terminals on an average day with about half of these movements made by suburban buses. Despite current usage, indications are that major suburban systems serving downtown locations may be phased out in the period ahead. Prospects are strong that these lines will serve as "feeders" to outlying terminals of the MBTA as new rapid transit extensions are pushed out into burgeoning suburban areas of the region. Braintree's projected terminal for south shore commuters for example, will be "backed up" by buses collecting the MBTA travelers in adjoining communities. Since the long term outlook for continued suburban bus service to downtown Boston is not bright, we do not recommend promoting a terminal facility for this type transportation service at South Station, except as an adjunct to an inter-city terminal.

Inter-City Travel. While prospects are for gradual phasing out of CBD suburban bus service, inter-city bus travel has been on the increase in recent years. Both Greyhound and Trailways report gains in operations and expectations for these

trends to continue. Some deficiencies with present locations and facilities were noted during our field surveys, and we believe a South Station terminal location for one or both of these major lines offers definite potential.

> Principal difficulties at the Trailways terminal stem from inadequate storage space to park inactive buses during off-peak hours. At the present time an appreciable portion of the public right-of-way in Park Square is used for this purpose. In addition, traffic at this major intersection hampers street loading of some buses at peak hours and also deters convenient ingress and egress to the terminal. Greyhound appears to have adequate bus facilities but lacks sufficient parking for private motorists meeting incoming travelers. The resulting congestion has served as a source of customer dissatisfaction, we understand.

A prospective terminal at South Station could relieve major problems associated with both present Greyhound and Trailways facilities. Apart from these gains, access to the Massachusetts Turnpike would be direct and more convenient than movements currently required from Park Square to Copley entrance ramps. Ample parking space to store vehicles, adequate parking for persons meeting incoming travelers and direct access to both the MBTA and the Southeast expressway would also be major plusses.

> Principal gains to Greyhound in our judgment, would be derived by exchanging its present, somewhat inadequate St. James Avenue terminal for a modern facility. A beneficial by-product might be the "freeing" of valuable downtown real estate for a favorable sale or leasing agreement in a new use. Similar to its disposition of property at 7th Avenue and 34th Street (for a reported sales figure of $13 million) and move to the Port Authority terminal in New York, potentials for a handsome return through transferring bus operations from an older facility to a more func-

tional one could motivate this prospective move, in our judgment. We would recommend initiating exploratory negotiations with the company on this basis.

Unlike Greyhound, Trailways leases its Park Square Terminal from the B&W lines. The present lease period expires in three years, propitious timing for consideration and planning a prospective move to new facilities. The attractions at a South Station terminal for the line and its customers could outweigh the traditional location pattern and apparent present assets associated with the Park Square area, we believe, and should appeal to this bus company as a definite possibility after 1968. An ICC examiner recently approved extension of Continental Trailways System to Boston. Although the precise impact of this approval is not now known, if fully effectuated it should further strengthen the need for expanded, modern terminal facilities such as those proposed at South Station.

Based on this analysis, we would recommend that 10 to 20 bays be planned for prospective inter-city bus operations at South Station. Waiting room and lounge area facilities could be joined with railroad accommodations already mentioned above. Approximately 10,000 additional square feet should prove adequate for this purpose, or a total of 35,000 square feet for joint rail and bus facilities. Specific negotiations with the bus lines should be entered as soon as reasonably possible, to establish firm commitments and detailed terminal requirements.

Helicopter Service

Principal helicopter service -- scheduled and charter -- for the Boston metropolitan area and other Massachusetts communities is presently provided by the Massachusetts Helicopter Airlines, headquartered at Logan International Airport. According to present plans, service provided by this firm will be expanded appreciably in the near future. In addition to increasing intra-city operations, an inter-city service should be operating in the next year tor two.

> As part of its expansion plans, MHA proposes to establish four to five helistops at key Boston and East Cambridge locations including: the State House; Government Center; Prudential Area; and MIT. Pending completion of final development schemes, helistops are also planned for the Kennedy Library in Cambridge and South Station in downtown Boston.

A guiding principle in plans for expanding helicopter service to Boston's central business district and other close-in locations is to utilize the helicopter's unique characteristics to maximum advantage. Able to fly directly from the airport to downtown destinations, this carrier can avoid surface transportation congestion and speed business travelers -- with high premiums on time saved -- to their destinations within minutes. According to MHA officials, fares competitive with taxis between Logan Airport and downtown Boston can be set.

MHA officials are of the opinion that a South Station helistop will "round out" facilities needed to adequately service key downtown sectors. Projected as a major new traffic generator of business trips and located close to Boston's major

retail and financial center, this site offers key advantages for helicopter service. In addition, a South Station location would be a likely choice for terminating inter-city travel between Boston and other Massachusetts, New Hampshire and Rhode Island communities, once this service has been inaugurated. Based on our field surveys, interviews with Massachusetts Helicopter Airline officials and comparable studies in other cities, we believe that the South Station transportation complex should provide for a helistop facility either on the ground, if available, or built into the roof of a projected structure, as appropriate. Waiting room, ticket area with related facilities could be coordinated with the railroad and bus terminal facilities.

Airport Ground Transportation

At the outset of this study, the possibility of a full scale downtown air terminal, including ticketing, baggage facilities, check-in as well as airport ground transportation connections was identified. Perhaps the most complete examples of such facilities are in New York City. Here an eastside terminal, located at 34th Street near the Queens-Midtown Tunnel services LaGuadia and Kennedy International Airports. This facility is actually owned and operated by the airlines, according to our information. A westside terminal located on 42nd Street near Tenth Avenue -- in the general vicinity of the New York Port Authority bus terminal -- services Newark Airport. This facility is operated by the Tri-Borough Bridge Authority, we understand.

Analysis of the present Boston situation however, indicates that the value and utility of such a downtown terminal would be limited. The location of Logan International Airport with respect to the downtown area -- one of the shortest distances among major U.S. airports -- would make it impractical for the typical airport traveler, even were he to start or end his trip in the downtown to make an intermediate stop at the terminal for ticketing and check-in rather than to go directly. Only where the length of the trip within the downtown, from point of origin or destination to the downtown terminal was short in relation to the terminal to airport trip, is such a facility justified.

Conditions in New York and, more recently, in San Francisco and Washington, D.C. can support these downtown terminal facilities. The Washington terminal became appropriate however, only in consequence of developments at Friendship In ternational Airport and Dulles International Airport, each located some 25 to 30 miles from the downtown area. Washington National Airport, in approximately the same position with respect to the downtown as Logan, requires no such facility.

This situation could change in Boston, in the years ahead. Should a second major commercial field be established at a remote location, it might also become necessary and appropriate to establish a full downtown airport terminal at that time. Should such a situation arise in the future, the South Station program as recommended below, could be adapted and expanded -- in combination with rail

terminal and possible bus terminal facilities -- to meet the new need.

> At the present time however, it is recommended that scheduled service be provided by limousine from the proposed trade and transportation site to Logan. This arrangement could take the form of a regularly scheduled stop and "run" to Logan from the site or a stop, subject to specific call. This service would be similar to that available at many downtown hotels in the area at the present time. In this instance, not only would it service the transients at the proposed hotel on the site, but also other site users as well as downtown area visitors.

The limousines or other vehicles used for this service could operate out of the projected bus terminal facilities, utilizing pick-up points and platform areas similar to those used for the bus service. Alternatively, a separate, curbside facility could be developed with pull-off and parking facilities provided for the passenger vehicles. A waiting room area, lounge facility and information counter should also be provided in connection with this service. This might be combined with the main transportation concourse, ticket offices and similar facilities as already discussed for the railroad and bus terminal operations.

Rapid Transit Facilities

There is an existing MBTA stop -- South Station Under -- located at the site at the present time. It is on the line connecting Harvard Square in Cambridge to Ashmont on the south side.

> As a condition of disposition, BRA requires that easements for all existing subway tunnels must be maintained. In addition,

> new construction must not damage or in any way impair MBTA facilities. Further, existing above-ground facilities must be restored or replaced on an acceptable basis to the MBTA.

Although there is some uncertainty at the present time as to future plans with respect to both the Southeastern Corridor as well as the core of the downtown, there is no question that a rapid transit station stop will be maintained at South Station. Under discussion are possible plans for extending service into the Back Bay area and possibly connecting South Station to North Station, perhaps along a new line. Even though South Station might serve as a rapid transit terminal on an interim basis in such modifications, it is expected to subsequently become an intermediate stop once again. Although no specific planning for rapid transit facilities can be completed at present, because of the important role of an MBTA station stop in this complex, it is recommended that it be fully unified with other transportation facilities on the site by interior connections insofar as possible.

Retail Sales and Services

The concentration of facilities and activities at the South Station site will generate major concentrations of pedestrians. Included would be the special use office tower, the motor hotel, the Trade Mart, parking garage, railroad and bus terminals, heliport, other airport travelers and rapid transit users.

> These sizeable traffic flows require and can support an extensive grouping of retail sales and service facilities to meet their needs. The existing complement of such facilities at the present South Station suggest -- even if not directly measuring -- the need and

potential for such activities. Specifically, we recommend that at least 25,000 square feet, but not more than 50,000 square feet be planned for the proposed trade and transportation center oriented directly to the needs of site users. This area should be located on and immediately adjacent to the main concourse area of the complex, where pedestrian traffic to and from the center and its facilities would focus.

The following types of services as well as shops and stores are illustrative of the units and uses which we believe would be most appropriate for the proposed complex:

Chapel
Telephone Center
Travel Bureaus, Aid and Agencies
Parcel Checking and Locker Facilities
Red Cap Services
Newsstand
Snack Bar
Cafeteria
Restaurant
Cocktail Lounge
Specialty Food Shop
Banks
Valet Shop
Shoe Repair and Shoeshine
Barber Shops
Physician
Florist
Book, Cards and Gift Shops
Candy Shop
Drugstore
Camera, Novelty and Leather Goods Shops
Sporting Goods, Toys and Hobbies
Jewelry Store
Music Store
Men's and Boy's, Women's and Children's Clothing Shops
Advertising Displays
Storage Lockers
Vending Machines
Beauty Shops

Special Traffic and Circulation Facilities

The key items here relate to arrangements for taxi and vehicular pickup facilities. The sizeable pedestrian volumes moving through the center complex -- especially at peak hour conditions -- can be expected to generate substantial need for taxi service as well as pickup and drop off from private automobiles.

> Pedestrian traffic crossing Dewey Square should be separated from vehicular traffic of all types, including taxis and other vehicles specifically entering or using the center complex. Provision for easy access to taxis from the center and adequate parking and waiting areas for a taxi line are critical. Similarly, pick up and drop-off points at convenient locations at the periphery of the center should also be provided.

A number of other key traffic and circulation features of the proposed development have been discussed specifically in connection with the parking and circulation study, part of this overall analysis. Included is discussion of special ramps, adjacent street capacity and garage circulation needs. In addition, specific servicing requirements for individual components in the center complex have been discussed in direct relation to their analysis.

Other Uses

Two additional types of development were identified at the outset of this analysis as possibilities for the South Station site -- post office depot and trucking terminal. Our findings on both of these developments are negative for the reasons discussed below.

Post Office Addition. South Station Post Office Annex with approximately 583,000 square feet in area, is the major postal installation serving all of greater Boston. Located adjacent to key regional highways and with direct access to rail facilities, this Annex is amply served and well equipped to meet the requirements placed on it, according to our information. Current plans are already underway to expand this facility by approximately 604,000 square feet. The expectation is that the expansion should serve to meet increasing needs as projected for many years ahead.

According to our field surveys, the post office will not require any land within the delineated South Station redevelopment parcels. Expansion for the South Station Postal Annex will extend from the rear of the present facility along Dorchester Street. Prospective development of the South Station renewal areas therefore, will not include allocations for postal handling facilities. All of these requirements will be met on the adjacent, separate site.

Trucking Terminal. Our analysis shows that a major trucking terminal at South Station would be of marginal utility and would pre-empt valuable space that could better be taken by more intensive-use activities. A primary factor in establishing a trucking terminal here would be to break down inter-city loads shipped via truck and rail and to break loads moving across the Mass Turnpike and other interregional highways, since we understand that loading limits are different on these two classes of roads. Analysis of these factors indicates that

in the case of both truck-rail shipments as well as truck load "breakage" -- to the extent of its demand -- can occur as effectively on other, nearby sites and there is no inherent reason for allocating area for this purpose at South Station.

> Freight shipments to South Station would be limited to transfers between the New Haven and New York Central systems in the near future. Railway express operations will be phased out in the next year or so, following acquisition of a South Boston site on which a new REA facility will be constructed, according to present plans. Transfers requiring truck terminal type facilities involving railroad and inter-city trucking at the South Station would, we believe, be moderate to negligible.

TRADE AND TRANSPORTATION CENTER

ANALYSIS OF SOUTH STATION DEVELOPMENT POTENTIALS

Section 6. Parking and Circulation

The purpose of this analysis is to furnish a general appraisal of the desirability of creating a parking facility in the South Station area of Boston and also to investigate related circulation aspects in connection with such parking.

Scope. Specifically, this analysis deals with the geographic area generally bounded on the north by Summer Street, on the east by Dorchester Avenue, on the southeast by the Broadway Bridge and the Fort Point Channel, and on the west by the New York-New Haven Railroad.

A general appraisal has been developed that illustrates the need and demand for parking which might be accommodated by major parking facilities in the project area. These needs and demands concern the surrounding areas and those of potential developments on the site itself. This appraisal also deals generally with the characteristics of parking demand as well as competitive parking supplies in adjacent areas.

Preliminary conceptual designs for proposed parking facilities including the amount of parking, placement of facilities on the site, tentative staging, and number of structures are recommended.

Further, suggestions are made concerning traffic and circulation in and adjacent to the project. These recommendations relate the necessary circulation facilities with the functional needs of parking, taxi and vehicular pick-up facilities, and service facilities. These recommendations further relate proposed site development to the existing and potential capacity of the adjacent roadnet.

Finally, a gross appraisal is made of potential improvement costs versus probable parking revenues. It should be noted, however, that this analysis is not intended as a refined parking economic feasibility study.

Methodology. While information was available from previous studies, this analysis required additional data to update the previous information and to supplement it where needed.

A portion of the Central Business District Urban Renewal Project that is adjacent to the South Station study area was resurveyed to evaluate any changes in data. The area immediately adjacent to the proposed garage site was also surveyed to obtain new information. An inventory of the existing parking supply, demand, and the rate structure for all garage, lot, and curb facilities was undertaken in these areas.

Information pertaining to new or proposed development both outside and on the proposed site was collected. These plans were reviewed and inventoried as they pertained to land-use, proposed parking and the proposed street network system.

Data from previous studies of the Central Business District, the South Cove Urban Renewal Project, and other sources were analyzed and related to the current inventory.

A generalized physical design for the proposed parking structure was developed, based both on the demand for the structure and the roadnet and ramps necessary to its operation. The general staging of construction was also developed according to both parking demand and design and construction aspects.

As a last step, the gross costs of a parking structure were compared with a general appraisal of parking revenue potentials based on several assumed parking fee schedules.

Existing Parking Conditions

Central Business District Parking. A resurvey of portions of the CBD Project Area closest to the proposed development site revealed that the usage of parking facilities had increased nearly four percent since the previous inventory and occupancy survey which was conducted in 1963.

The total inventory of legal curb and off-street parking spaces available was 2,345, but the peak hour occupancy checks revealed that there were 2,369 parkers.

Off-street spaces were filled to approximately 80 percent capacity while curb spaces were filled beyond their capacity. In fact, 70 percent of all curb parkers were parked illegally even though nearly 175 new spaces were created since the 1963 survey.

This percentage of illegal curb parkers nearly equals the findings of the 1963 survey.

Area Adjacent to South Station. Field surveys indicated that the area immediately adjacent to the proposed garage site had 186 available curb spaces with an occupancy of 410 parkers, or that 55 percent were illegal parkers.

There were 1,316 off-street spaces and 1,383 off-street parkers.

Combined off-street and curb inventory totaled 1,502 spaces and an occupancy of 1,793 vehicles.

Figure 1 illustrates the inventory and occupancy of off-street parking spaces in the study area adjacent to the proposed garage site.

South Cove Parking. This entire renewal project area showed a future parking demand of 1,215 spaces more than those spaces proposed or existing to remain.

EXISTING OFF-STREET PARKING SUPPLY AND OCCUPANCY

SOUTH STATION DEVELOPMENT STUDY

FIGURE 1

The greatest unsatisfied demand is in the quadrant of the project which is closest to the proposed garage. This area of greatest deficiency is also adjacent to a portion of the Central Business District.

Because of its distance from the proposed South Station garage site, only 20 to 25 percent of the projected deficiency of 1,215 spaces fall within the zone of attraction of the garage (250 to 300 spaces).

Rate Structures. Within the survey area adjacent to the proposed garage site, a comparison of current rate structures with those of the 1963 period show several significant changes. They are as follows:

- The area of $2.00 to $3.00 all day parking charge has expanded toward South Station and is centered on Summer Street. (See Figure 2)

- The area of $1.00 or more first hour parking charge has shifted closer to South Station. (See Figure 3)

The South Station area itself is within the general area where first hour parking rates are 50 cents or slightly lower. The proposed site also is located in the area where all day parking rates are generally $1.50 or slightly less.

There are however, a number of off-street parking facilities where rates are higher than those previously mentioned and they are well used as the occupancy survey indicates.

ALL DAY PARKING RATES
SOUTH STATION DEVELOPMENT STUDY

FIGURE 2

FIRST HOUR PARKING RATES
SOUTH STATION DEVELOPMENT STUDY

FIGURE 3

Analysis of Previous Studies

Numerous reports (listed in the attached bibliography) contributed information relative to the determination of the gross demand for parking in the study area. The most significant of these facts are as follows:

- During the peak mid-day accumulation of parkers it was found that 73 percent of all CBD parkers were long-term and 27 percent were short-term parkers. On the fringe of the CBD it was estimated that 80 percent were long-term parkers.

- Long-term parkers had a turnover rate of 1.1 while short-term parkers had a turnover rate of 2.8.

- Existing gross supply and demand for parking in the CBD was as follows:

	Supply	Demand
Off-street	11,900	11,900
Legal curb	900	850
Illegal curb[1]	--	2,250
CBD	12,800	15,000
CBD Fringe	3,600	3,000
Grand Total	16,400	18,000

[1] Including double parkers

- It was estimated that a 12 percent to 20 percent increase in parking demand would be developed. This is based on the Boston Redevelopment Authority Master Plan Draft of 1963 and other recent studies. These studies have visualized such a growth factor in the Downtown Area by 1980. This growth

pattern generally reflects anticipated metropolitan population and economic growth during a similar period of time.

- Similar increases would also apply to other modes of travel. For example, transit trips are expected to increase 20-25 percent. A decrease in automobile occupancy of 1.54 to 1.45 is also expected which accounts in part for increased automobile trips to the CBD.

- By adding an additional 15 percent to permit congestion-free circulation and turnover of vehicles, adjusted future parking demand for the CBD would be as follows:

	Demand Range
Long-term	12,400 - 13,300
Short-term	6,100 - 6,400
Errand	2,900 - 3,000
Total	21,400 - 22,700 spaces

- Summarizing, the additional parking spaces needed in the CBD by 1980 (but excluding those facilities already proposed) are as follows:

	Range
Long-term off-street	3,700 - 4,600
Short-term off-street	5,800 - 6,200
	9,500 - 10,800

Future Development

No new development of major significance in the area surrounding the proposed garage site was discovered that would have an immediate effect on the parking demand.

Present planning for the CBD however, does significantly alter the existing development for a large segment of the CBD that is closest to the proposed garage site. The most significant of these changes are as shown in Figure 4 and include expansion and intensification of the retail and office functions near South Station.

Present plans, based on a 20 year outlook, propose parking within the zone of attraction of the proposed garage site that would create 2,250 spaces, 1,800 of which would be the net gain due to the elimination of about 450 existing off-street spaces.

On-site development proposals include trade facilities; i.e., office building, U.S. Customs Offices, Trade Mart, and Motor Hotel; transport facilities; i.e., railroad and bus terminal, airport-downtown limousine transportation, Heliport, taxi-auto pickup, and rapid transit; and miscellaneous, retail sales and services. Their development would generate a considerable amount of on-site demand for parking which would be included in the gross demand for parking.

BASED ON PRELIMINARY STUDIES OF THE BOSTON C.B.D. BY BRA STAFF AND CONSULTANTS.

GENERALIZED FUTURE LAND USE

SOUTH STATION DEVELOPMENT STUDY

FIGURE 4

Gross Future Parking Demand

The gross future parking demand is based on essentially three segments of the market, i.e., demand that can be captured from the CBD, demand from areas adjacent to the proposed garage site where there is a parking shortage and demand from development on the site itself. Although total demand will be partially satisfied by plans proposed for the CBD, the following figures represent that amount of patronage that can conservatively be attracted to the proposed garage site. (See Figure 5)

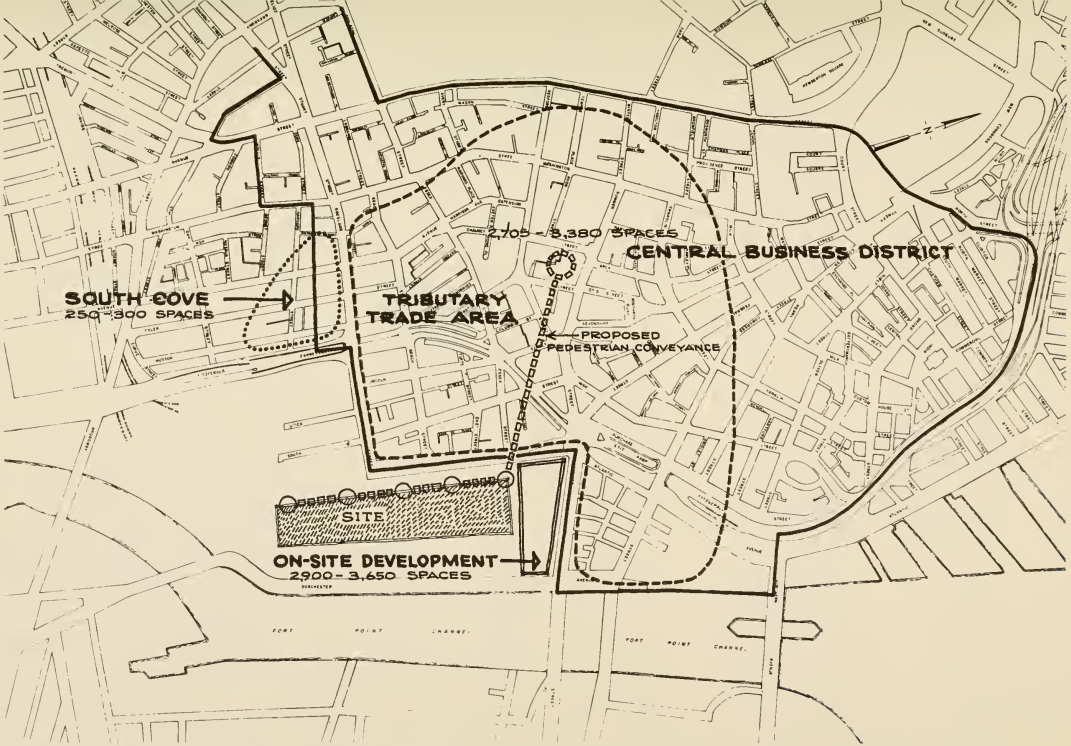
CBD Demand. It is estimated that the garage can attract the following amounts of parking from the CBD. This attraction assumes that some form of pedestrian conveyance system, i.e., mini-bus, moving sidewalk, electric shuttle, etc., will transport people from the garage to the Summer Street retail core area.

2/3 of shopper parking (short-term)

1/2 of employee parking (long-term)

1/4 of other parking (short-term)

	Range of Required Spaces
Shopper parkers	1,930 - 2,130
Employee parkers	1,850 - 2,300
Other parkers	725 - 750
Total	4,505 - 5,180



UNSATISFIED FUTURE PARKING DEMAND
SOUTH STATION DEVELOPMENT STUDY

FIGURE 5

This range of spaces should be reduced by an amount equal to presently planned new parking in the CBD or by about 1,800 spaces. This results in a net market for CBD parking of 2,705 to 3,380 spaces.[1]

South Cove Area Parking. It is estimated that 20-25 percent of the projected demand for that area that cannot be satisfied in the project area itself can be attracted to the proposed garage. This amounts to 250-300 long-term parking spaces.

Demand Based on Proposed South Station Development. Facilities to be located on the site and adjacent to the proposed garage, lead to a very conservative estimate of parking demand as follows:

Proposed Development	Range of Parking Spaces
Trade Facilities:	
a. Office Building	500 - 600
b. U.S. Customs Service	10
c. Trade Mart	2,000 - 2,500
d. Motor Hotel	350 - 500
Transport Facilities	20
Miscellaneous Retail and Services	20
	2,900 - 3,650

[1] Primarily short-term parking

Summary of Gross Demand. The total gross demand of the three elements -- the CBD, South Cove UR project, and on-site development -- are as follows:

CBD	2,705 - 3,380
South Cove	250 - 300
Site Development	2,900 - 3,650
	5,855 - 7,330 spaces

Circulation Analysis

The analysis of the circulation system has been approached on two bases. First, given that there is more than sufficient demand for a 5,000 space garage, those roadnet improvements necessary to make the proposed garage function properly have been analyzed. Second, on the premise that no street improvements can be contemplated, at least initially, the maximum size of garage that can be served by the existing street systems has been determined.

Direction of Approach. An analysis of direction of approach to the proposed garage site reveals the following figures (as shown in Figure 6):

North	- 31 percent
East	- 12 percent
South	- 29 percent
Southwest	- 12 percent
West	- 16 percent

It is also estimated that of these percentages, approximately 42 percent of potential users of the proposed garage would use the expressway and turnpike system.

For the purpose of calculating the most critical discharge rate of vehicles from the garage, it was assumed that as much as 80 percent of the

DIRECTION OF APPROACH
SOUTH STATION DEVELOPMENT STUDY

FIGURE 6

total garage capacity would constitute the volume for which the external access system must be designed.

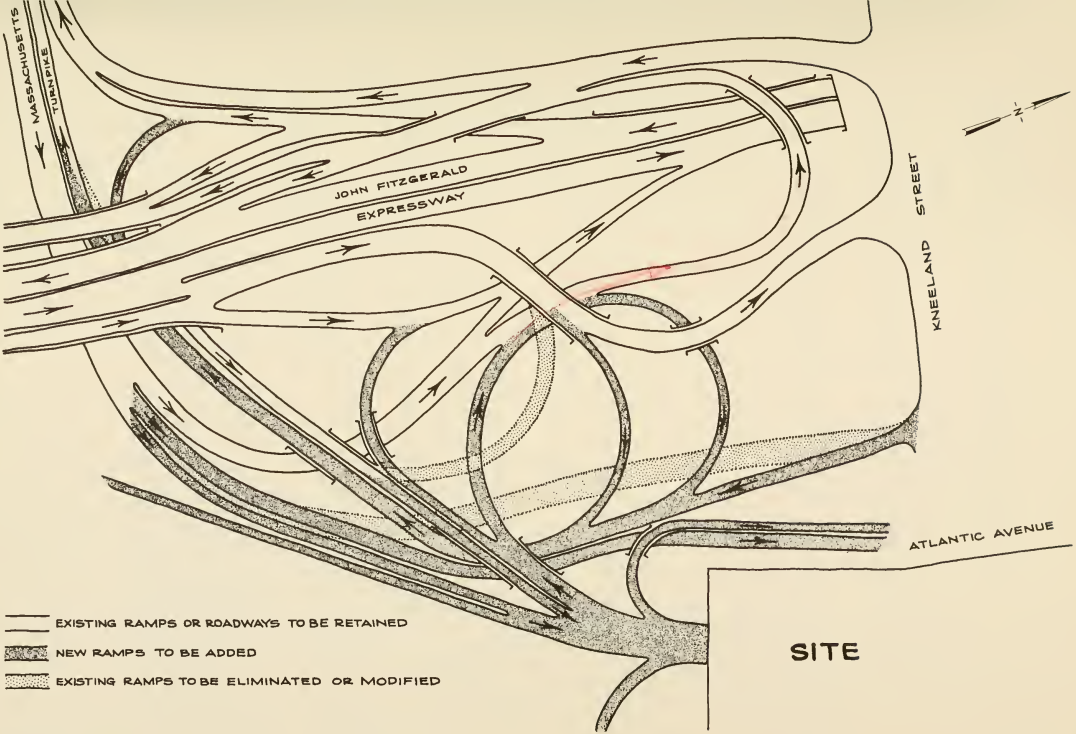
Road Net System. Direct access to the Massachusetts Turnpike and north and south on the Expressway is necessary. Just as important is the access that must be provided to the major surface streets that parallel the proposed garage -- Atlantic and Dorchester Avenues.

Since the first floor of parking must be 22 to 25 feet above railroad grade to afford sufficient clearance, elevated ramps will be necessary in all cases to reach this level.

The concept of the garage would be to have the Turnpike, Dorchester Avenue, and Central Artery vehicles enter from the south end and the surface street entrance from both sides near the north end. Exits from the facility would be from the same points, entering onto ramps which either connect to surface streets or the Turnpike and Expressway.

Vertical movement of vehicles would be contained within the structure itself.

To accomplish the external circulation, about 1,800 feet of existing ramps would have to be eliminated and 8,700 feet of new ramps constructed (see Figure 7). These changes would provide direct access to and from the



PROPOSED ACCESS SYSTEM
SOUTH STATION DEVELOPMENT STUDY

FIGURE 7

garage to all the directions of the Turnpike and Expressway.

The total costs of these external roadway changes, including both ramp additions and ramp changes, would amount to about $3,000,000.

Access System for 5,000 Space Garage. Using the previously described direction of approach figures and the highest discharge rate likely, the circulation system was designed to allow the garage to function as required. Based on proposed plans for the improvement of Atlantic and Dorchester Avenues and then assigning volumes resulting from both the proposed garage and general CBD activity, it was found that these plus other adjacent surface streets would be operating at about 90 percent of their capacity.

Using ramp volume assignments, as established in the GNRP Transportation Studies, it was found that the proposed ramp connectors to the garage and existing expressway ramps could also handle anticipated traffic.

The ramps, however, unlike the surface streets, would be operating at only 45-55 percent capacity.

Based on the access system shown in Figure 7, the maximum number of spaces that the proposed garage could contain would be 7,000. Eighty-five percent of the discharge resulting from the additional 2,000 parking spaces

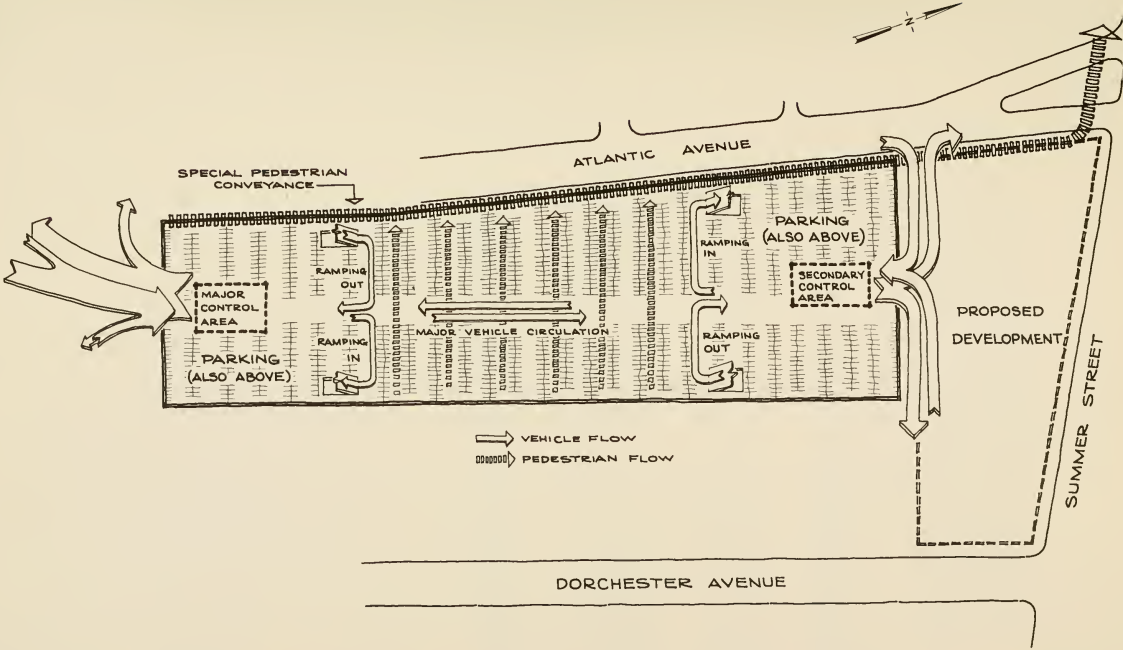
would have to be accommodated on the expressway ramps, however, as the surface streets would be operating at their full capacity.

Maximum Garage Size with No Circulation System Changes. Again using the aforementioned direction of approach figures, and the highest discharge rate likely, a maximum garage size was computed based on no external street or ramp changes. Because all traffic from the garage would discharge to surface streets even though a substantial amount would be expressway bound, it was found that the maximum garage size possible would be approximately 2,400 spaces. This would require all surface streets in the immediate area of the garage site to operate at 100 percent of their available capacity.

A General Garage Concept

The following characteristics of the proposed garage are herewith suggested (see Figure 8):

- The garage would basically be of the self-park type.
- Six ticket dispensers, two at the surface street entrances, and four at the combined Turnpike and Expressway entrances would be necessary.
- After parking, patrons would proceed on foot to the Atlantic Avenue side of the structure. Along this side of the structure would be located the vertical pedestrian circulation (elevators, stairs, etc.), entrances to the horizontal conveyance, speed walk, mini-bus, etc., and the pay stations for patrons returning to the garage.



GENERAL GARAGE CONCEPT
SOUTH STATION DEVELOPMENT STUDY

FIGURE 8

- Payment of parking charges could be accomplished at four to six stations adjacent to the pedestrian conveyance stations. Ticket collection at the exits would require two attendants at the surface street exits, and four attendants at the Turnpike and Central Artery exits.

- The garage would be of flat slab design.

- Vertical circulation for the garage floors would be accomplished within the garage on one-way ramps near the ends of the garage.

- Each floor of parking would measure approximately 1,300 feet by 350 feet and contain 1,250 parking spaces. This averages about 365 square feet of garage space -- including circulation aisles and ramps -- per parked car.

- Provisions for pickup and taxi drop-off would be planned for the north end of the site adjacent to the other proposed development on the site. The function of switching from car to bus, train, MTA, or walking purpose would most easily be performed at this location.

- Likewise, transfer of goods, i.e., truck and railroad, parcel post, etc., would most easily be performed at the south end of the site beneath the first floor of auto parking.

Staging of Improvements

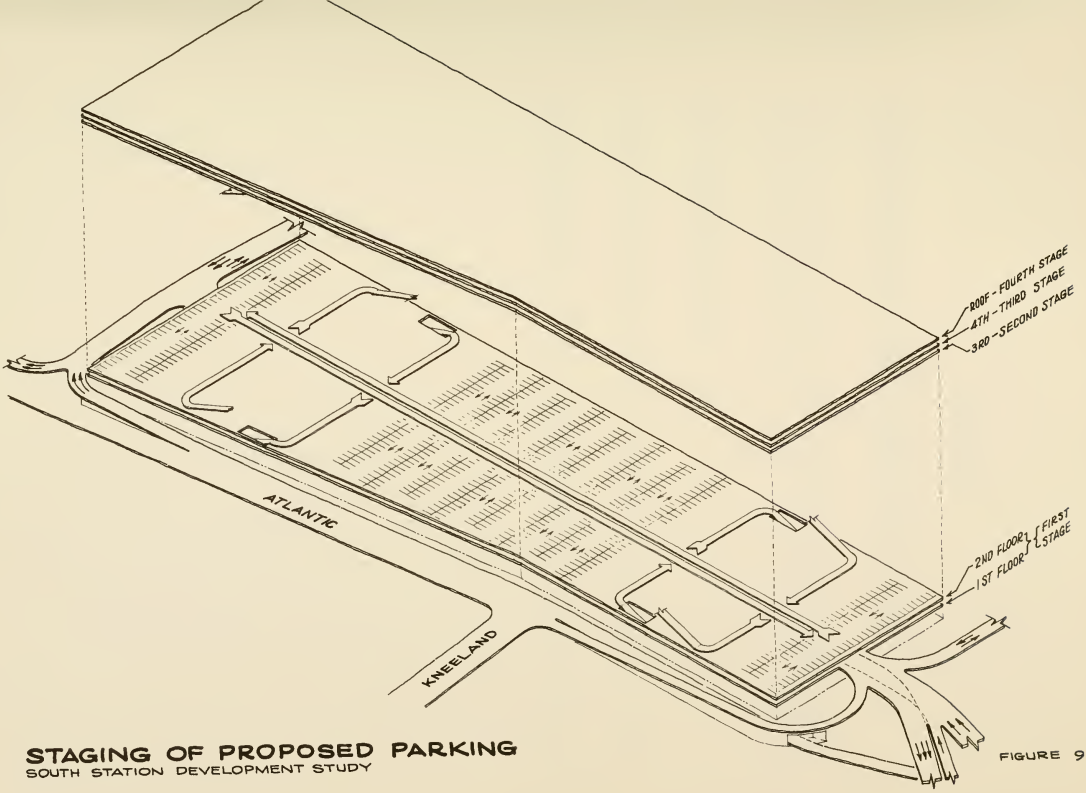
Garage. The staging of the garage construction should be accomplished vertically rather than horizontally (see Figure 9). This would be necessary due to the fact that all entrance and exit ramps and vehicular and pedestrian controls must be constructed if the garage is to have convenient accessibility and is to function properly.

By constructing the first two floors in the initial stage, each successive floor could be built without greatly disrupting functions below.

Ramps and Surface Streets. As it would be necessary to provide direct access immediately (as described previously), it is recommended that all ramp construction be in the initial stage. It is estimated that the initial stage would be needed by 1970-72 based necessarily on staging of other site developments and 1972 demand for parking as a result of CBD proposed plans.

This would also include the Atlantic Avenue ramp to be constructed at the same period that the balance of the CBD roadnet plan would be initiated.

While an exit to Dorchester Avenue would be constructed in the initial stage, the entrance ramp from Dorchester could be scheduled for the period when the entire Avenue is reconstructed. Initial access to the garage from Dorchester would then be Atlantic Avenue via Summer Street.



STAGING OF PROPOSED PARKING
SOUTH STATION DEVELOPMENT STUDY

FIGURE 9

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Part C. DEVELOPMENT PROGRAM

TRADE AND TRANSPORTATION CENTER

ANALYSIS OF SOUTH STATION DEVELOPMENT POTENTIALS

Section 7. Recommended Program

The overall program for development of the Trade and Transportation Center at South Station can now be recapitulated. The elements which can appropriately be planned for the complex fall in three major categories -- trade facilities, transportation facilities and miscellaneous supporting items.

> Major opportunities and strong development potentials have been established for all primary components which would, as previously mentioned, provide the "backbone" of the proposed center. Included among these would be the Trade Mart; special use office building; prospective U.S. Customs Service operations; major parking garage and selected transportation facilities. A broad variety of secondary and supporting facilities also show definite potentials for this site, although not critical to the success of the proposed complex. Included among these would be the motor hotel; bus terminal; retail sales and service facilities; heliport; and similar items.

The proposed development is "timed" to reach the market in the late Sixties to the early Seventies, depending on the pace and limitations imposed by renewal and technical engineering considerations. The potentials identified for the speci-

fic, recommended components in the complex are already substantially in hand, and should not impose any constraints on scheduling for development. Other than the garage, only the Trade Mart would be programmed for staged development. Approximately half the ultimate Mart program is expected to be built in the first stage. Precise timing of the second stage of Trade Mart operations would be based on specific experience in Stage I operations. The possible staged extension of the parking garage, depending on ramp and street capacity developments, might also occur at a later date. This point is discussed in complete detail in the Parking and Circulation Section.

The development program for the South Station site can be summarized in tabular form showing the key components in the complex and their size allocations for preliminary planning purposes together with notes on special features.

SUMMARY OF SOUTH STATION SITE DEVELOPMENT PROGRAM 1/

ELEMENT	SITE ALLOCATION Gross Floor Area (S F)	SITE ALLOCATION No. Units	SPECIAL FEATURES	COMMENTS
A. TRADE FACILITIES:				
1. Special use office bldg.	300,000	-	Tower Structure	Trade & commerce, port-oriented uses
2. U.S. Customs Service Appraisers Stores	90,000	-	Open floor area, single level desirable; truck & auto access	Includes postal unit, convenient to Customs offices in tower.
3. Trade Mart Stage I	480,000	-	Multi-level; sizable floor	Display & marketing; wholesale & distribution; key commodity groups. Commercial & family market orientation.
Stage II	950-1,100,000	-	40-50,000 sf; truck & auto access	
4. Motor Hotel	-	500 rms	Meeting & banquet facilities, public restaurant included.	
B. TRANSPORT FACILITIES:				
1. Railroad Terminal Facilities			Waiting room-concourse, ticketing area	Present 17-tracks to be reduced; minimum of 2 to remain, bus parking area required in addition to bays.
2. Bus Terminal	35,000	10-20 bays	combined with retail services; bus-limousine bays combined	
3. Airport-Downtown limousine transport				
4. Heliport	-	-	Roof top facility	
5. Taxi-Auto Pick-up	-	-	Curb cut, auto storage	
6. Rapid Transit	-	-	Sub-street level	Short-run terminus for future extension. Oriented to long and short term needs in area, on-site development.
7. Parking Garage	-	5,000 cars	Serviced by ped. Conveyance	
C. MISCELLANEOUS SUPPORTING:				
1. Retail Sales & Service	50,000	-	Combined at concourse	Oriented to on-site demand
2. Site Access, Loading Service Facilities	-	-		

1/ Truck terminal and break-point facilities eliminated from consideration on this site; Post Office requirements to be fully handled on adjacent tract.

Development Problems. A number of factors should be taken into account as potential development problems in the South Station program. In each case, they represent issues not yet fully resolved or additional complexities at this location in contrast to those which might be normally expected under usual development conditions in the Boston area.

These points can be summarized in the following list:

1. Off-Site Work. Two major and costly items of work appear specifically necessary in order to make the on-site development function appropriately. The first relates to the approximately $3 million expenditure required to tie ramps on the Mass Turnpike and central artery into the proposed parking garage. In addition, and at the opposite end of the site, a pedestrian bridge across Dewey Square tying into lower Summer Street and the CBD commercial redevelopment area, would be essential. In both cases, the work called for is located outside of the boundaries of the renewal disposition parcels.

2. Air Rights Construction. Because of the retention of on-site rail facilities including extensive trackage, much of the projected development would be built on air rights over the rail trackage. Although this has been done many times in recent years in many other locations, the construction process is made somewhat more complex where active tracks are involved and the free movement of construction equipment during the erection process is impeded.

3. Easements. Numerous easements are called for as part of the BRA disposition plan. Although these pose no specific difficulties in most instances, a number of them, including perhaps the MBTA easement, will create specific, extra-cost situations both in dealing with the existing easement as well as in relating the existing facility to the completed trade and transportation complex.

4. Parking-Pedestrian Movements. The location of the proposed garage in relation to key, existing downtown parker destinations, together with the stated objective of BRA to provide for short-term CBD parkers here, has led to the provision for special pedestrian conveyance as set forth in the section on Parking and Circulation. Although included in the preliminary plan, final arrangements for operation and funding of this service have yet to be made.

5. Railroad Terminal. Apart from the retained trackage, disposition by BRA is conditioned on reservation of terminal space for the railroad. Although the reservation itself appears to pose no problem, the basis for establishing a rental rate for new space is not related to the cost of providing it.

6. Disposition Price. No land price has been established by BRA as yet. A procedure however, has been established. Two independent re-use appraisals undertaken on an independent basis will be completed. The prices so established will be fixed and binding on the Authority, according to our understanding.

Site Layout. The BRA in its preliminary disposition materials, has parcelized the South Station site as follows:

	Ground Area
Parcel A	120,000 square feet
Parcel B	50,000
Parcel C	680,000
Total	850,000 square feet

Currently approved for acquisition from the Terminal Corporation, the City Council has also approved the early disposition of this site, we understand. Parcels A and B will be cleared of all existing development and would be available for

immediate development. Parcel C, containing existing track areas, would be available for immediate air rights development. As previously mentioned, depending on possible track retirements in the future, ground development on Parcel C might also be permitted.

Minimum development requirements on each parcel have also been established by BRA. These can be summarized as follows:

	Minimum Required Development	Use
Parcel A	400,000 square feet	Commercial
Parcel B	300,000 square feet	Offices, motel or similar
Parcel C	3,500 car spaces	Air rights garage

A preliminary site plan and architectural design is currently being prepared by Sert, Jackson and Associates, Architects of Cambridge for the proposed Trade and Transportation Center. This plan will recommend specific layouts for the site and the activities proposed here. For purposes of "testing" the proposed program against the BRA requirements, the following tentative arrangement of site uses can be established however:

	Element	Estimated Scale (square feet or units)
Parcels A and B	Office Building	300,000 sq.ft.
	Appraisers Stores	90,000
	Trade Mart, Stage I	480,000 1/
	Motor Hotel	200,000 2/
	Rail-Bus-Limo combined facility	35,000 3/
	Main Concourse	30,000 2/
	Retail Sales and misc. services	50,000
	Sub-total	1,185,000 sq. ft. 1/
Parcel C	Parking Garage	5,000 cars
	Heliport	10,000 sq.ft.
	Service Station	25,000
	Sub-total	5,000 cars and 35,000 sq. ft.

1/ Does not include Stage II of Mart; projected additional square footage of 480,000 would increase A and B total to an estimated 1,665,000 square feet.

2/ Based on preliminary estimates by Sert-Jackson and Associates.

3/ Includes interior space only; platforms, ramp, etc., are not in this figure.

The summary above shows that the proposed development is substantially in excess of that required by BRA on all parcels. Specifically for A and B combined, the planned 1,185,000 square feet -- not including Trade Mart Stage II -- exceeds the required 700,000 square feet by some 70 percent. On Parcel C, the 3,500 cars garage minimum is exceeded by the planned 5,000 spaces as well as the 35,000 square feet of additional building proposed.

TRADE AND TRANSPORTATION CENTER

ANALYSIS OF SOUTH STATION DEVELOPMENT POTENTIALS

Section 8. Financial Factors

A preliminary evaluation of the financial position for the proposed trade and transportation center was undertaken as part of this study. Although not possible to complete a definitive analysis at this stage, the outlook for gross revenues which might be realized from key proposed facilities; expenses connected with their operation; and net revenues expected from major elements in the center can be calculated with sufficient accuracy for this initial overall feasibility check.

Taking into account the level of revenues projected, possible payments to the city of Boston in lieu of real estate taxes can also be calculated. Amounts available for application to debt service can be established by providing for 150 percent coverage in the projected net earnings. Finally, based on potential bond terms, the size of revenue issue which might be supportable can be determined at this stage.

For purposes of these calculations, bond terms generally comparable to the recent Massachusetts Port Authority issue in 1964 were applied. Specifically, a 40-year term issue bearing 4.25 percent interest with level payment refunding schedule was assumed. Similarly, "in lieu" tax payments to the city have been established with reference to customary assessment and real estate taxation procedures currently applicable in the city of Boston.

By comparing the supportable revenue issue, calculated as indicated above, to estimated project costs, preliminary feasibility for major elements of the proposed center can be appraised. Estimated improvement costs -- including appropriate allowances for professional fees, interim and related project costs -- have been conservatively projected. An allowance for land cost established on a preliminary basis, has also been entered. Finally, estimated financing charges plus a contingency allowance equal to approximately 10 percent of total improvement cost has been added.

> On this basis, we find that the proposed trade and transportation center is feasible in overall financial terms. Specifically, the outlook is for adequate gross revenues from key facilities -- allowing for appropriate vacancy and collection losses, operating expenses and "in lieu" tax payments -- sufficient to support the necessary revenue issue for this project including scheduled improvements, associated fees and interim charges as well as land acquisition, contingency and financing allowances.

These preliminary financial calculations are, of course, subject to revision based on finalization of project development plans, recomputation of project development costs based on specific plans and detailed engineering information; more specific dealings with prospective tenants; and precise calculations as to operations in the specific facilities proposed. In addition, review of possible bond terms, especially interest rates obtainable, would be required in the context of the bond market at the time the issue was offered. The present figures however, are sufficient for determining initial feasibility for the project analysis and to provide the basis for next steps in refinement and further analyses.

Revenue Sources

Five key elements in the proposed development have been specifically taken into account in analyzing the financial position of the complex. The five elements comprise the dominant activities in the center from both financial and functional points-of-view. Included are the following:

1. Special office uses: Trade and Commerce Tower
2. Appraiser's stores: U.S. Customs
3. Trade Mart
4. Motor hotel
5. Parking garage

The normal, early-year outlook for gross revenues from these five key activities at the center has been projected. The projection basis for earnings

Out of date

was based on comparable existing facilities in downtown Boston. Where experience elsewhere was applicable in terms of specialized building types and tenant potentials -- as in the case of the proposed Trade Mart -- it was taken into account. Specifically, annual rentals averaging in the $4.00 to $5.50 per square foot range for mart and office building were projected. The figure for appraisers stores would be substantially lower, based on the type of occupancy involved and $2.60 per square foot was used here.

Earnings from the motor hotel were projected in terms of a lease deal with an operator rather than on direct rentals from users. Projected payments of $1,500 per room per year by the operator includes an allowance for in lieu payments to the city. Operating expenses would be the responsibility of the lessee. A similar pattern would apply to income from food and miscellaneous operations in the motor hotel.

The 5,000-space parking garage is expected to grass some $500 per space per year. This figure takes into account not only the projected rate structure appropriate for the garage but also expected operating days and hours, average length of parker stay and intensity of utilization at this facility. In order to realize gross revenues as indicated, it is estimated that the following rate structure would be effective:

First hour	$0.50
Each additional hour	$0.35
All day	$1.75

While the first hour rates are slightly higher than rates in the immediate area of South Station today, it is felt that the proposed development on the site and the proposed expansion of the central business district toward South Station would justify these rates for short term parkers. The projected first hour and additional hour rates however, are lower than those most frequently found in the central business district at present. The all day rates as projected should also prove attractive to potential users, since they are in line with existing rates in the immediate area at the present time.

> Total gross revenues of $6,620,000 are projected in normal, early years for the key facilities in the proposed center. This figure would be supplemented by income from other facilities in the center, as discussed in further detail below. In addition, in subsequent years, increments in the projected income based on planned Trade Mart expansion as well as possible supplements from percentage leases in such facilities as the motor hotel might also be expected.
>
> A total of $275,000 in vacancy and collection losses have been allowed for the trade and commerce tower and Trade Mart facilities. These represent between nine and ten percent against gross for each of these two elements. Calculations as to the levels of utilization have been "built into" gross income projections for the parking garage. The motor hotel lease payments were projected as a minimum figure under the assumed lease. Revenues for the appraiser's stores facility would be

based on direct lease for all space provided with the U.S. Customs Service, hence no allowance has been made for losses in this rental. Effective gross revenues from the five key elements would total $6,345,000 per year.

Secondary Activities. In addition to the major elements of the center as analyzed above, a number of other activities have been discussed earlier in this report. These would of course generate revenue for the proposed development and would in turn, require expenses for their operations as well as debt service to repay capital costs. In addition, further "in lieu" payments to the city would also be involved for these facilities.

Projections of costs and revenues for these secondary facilities cannot be developed with sufficient accuracy to present specific figures at this time. However, preliminary investigation indicates that the secondary elements as a group should be financially self-sustaining with respect to operating costs, debt service requirements as well as reasonable in lieu payments. The additional, secondary activities can be listed as follows:

1. Railroad Terminal: Ticketing and trackage
2. Bus Terminal: Ticketing and bus parking
3. Heliport: Ticketing and aircraft operations
4. Ground Transportation: Ticketing and limousine operations area
5. Taxi Line
6. Retail Sales and Service
7. Miscellaneous: Including advertising displays; other consumer services; combined waiting areas; vending machine operations; locker services; rest rooms; and red cap services.

Project Operations

Normal operating costs, including all appropriate services, maintenance and other expenses have been calculated for the proposed facilities. Allowances in each case, correspond to local experience as well as patterns elsewhere where applicable. Projected expenses would range from a low of $0.50 per square foot for appraisers stores to $1.80 for the offices and account for some 20 to 36 percent of effective income. Trade Mart operations would fall within these ranges. In the case of the motor hotel, the operator's lease would provide for coverage of operating costs as previously mentioned. Parking garage wages, utilities, maintenance, insurance, management and similar operating costs typically vary from $100 to $170 per parking space per year. Using an average figure of $140 per space per year, the annual operating costs would total $700,000 for this case.

Toking into account operating expenses for the key facilities proposed, a total projection of $1,515,000 per annum would result. On this basis, net revenues from operations would total $4,830,000 before debt service and any in lieu payments. Income and expense data are summarized for the five major activities in the following tabulation:

PRELIMINARY FINANCIAL SUMMARY 1/

Major Activities	Proj. Gross Rev. ($000)	Vac. & Coll Loss ($000)	Eff. Gross Rev. ($000)	Proj. Oper. Exp. ($000)	Net Rev. ($000)
1. Trade and Commerce Tower Special Offices	$1,375	$125	$1,250	$450	$ 800
2. Customs Appraisers Stores	$ 235	--	$ 235	$ 45	$ 190
3. Trade Mart					
A. Stage I	$1,600	$150	$1,450	$320	$1,130
B. Stage II	--	--	--	--	--
4. Motor Hotel 2/					
A. Rooms	$ 750	--	$ 750	--	$ 750
B. Food	150	--	150	--	150
C. Miscellaneous	10	--	10	--	10
Sub-total	($ 910)		($ 910)		($ 910)
5. Parking Garage	$2,500	--	$2,500	$700	$1,800
TOTAL	$6,620	$275	$6,345	$1,515	$4,830

1/ Projected for normal, early year and major development components.

2/ Based on least net of operating expense but including allowance for in lieu payments.

Payments In Lieu of Taxes

The proposed center should be able to provide the city with substantial in lieu payments without jeopardizing obligations to Port Authority bondholders, the extent of services provided to tenants or quality of maintenance. At full development some years hence -- taking into account not only major activities as

discussed above, but also secondary activities and the planned trade mart extension -- total annual in lieu payments to the city of some $2 million could potentially be sustained. We would recommend however, that in lieu payments to the city be scaled to accord with completion, occupancy and financial stability of the various elements proposed. On this basis, the indicated $2 million figure should be obtainable within approximately a five to seven year period following completion of the initial phase of center operations.

At the outset, based only on major components in the proposed complex, we estimate that annual in lieu payments of $1,050,000 would be sustainable under normal conditions in early years. This figure has been estimated taking into account current Boston assessment procedures for the various facilities proposed as well as economic factors affecting the proposed development and revenue bond financing. As mentioned, this initial figure should approximately double in the ensuing period as operations stabilize and as additional facilities are put into place.

Bond Issue, Capital Costs and Project Feasibility

In lieu payments of $1,050,000 as indicated, against the previously calculated operating net would result in a net figure of $3,780,000. Allowing for 150 percent coverage of debt service by net revenues, a total of $2,520,000

would thus be available. Based on 40-year term bonds, issued at 4.25 percent interest under the present trust agreement and assuming a level payment schedule, a total issue of $48 million could be supported, according to our calculations.

This figure can be compared with estimated capital cost requirements for the project. For preliminary purposes, conservative unit costs for each of the major building elements in the complex have been established. On a square foot basis, these range from $15 per square foot for the single story appraiser's stores unit to $20 for the Trade Mart and $25 for the Trade and Commerce offices. The motor hotel has been projected at $12,000 per room not including furnishings, and allocating all public area costs on a room basis. The parking garage has been projected at $3,000 per space. These unit cost figures include allowances for construction costs as well as professional fees and other interim costs.

> On this basis, total improvement costs of $39,450,000 are indicated. An additional allowance for land estimated at $3,500,000 has been made. Finally, a contingency allowance at approximately 10 percent of improvement costs and estimated finance charges have been entered. Together the project capital costs would total an estimated $48 million.

These data can be summarized as follows:

ESTIMATED CAPITAL COST SUMMARY

Major Activities	Est. Project Cost ($000) 1/
1. Trade and Commerce Tower Special Offices	$ 7,500
2. Customs Appraisers Stores	1,350
3. Trade Mart	
A. Stage I	9,600
B. Stage II	
4. Motor Hotel	
A. Rooms	
B. Food	
C. Miscellaneous	
Sub-total	6,000
5. Parking Garage	15,000
Total Improvements	$39,450
Estimated Land Cost	3,500
Contingency and Finance Cost	5,050
TOTAL	$48,000

1/ Includes construction cost plus allowances for fees and other interim costs.

Thus, the $48 million estimated as necessary to complete the project, including construction costs for proposed improvements; professional fees; interim costs; land purchase; contingency allowance; and financing charges, would be obtainable through a revenue bond issue supportable by revenues available from the proposed facilities. As previously mentioned, secondary facilities as well as extensions of the trade mart, although not analyzed in detail at this time, appear to be similarly self-sustaining.

Port Authority Financial Position

The favorable feasibility finding in this preliminary analysis indicates that Port Authority revenue certificates for the proposed development could be successfully marketed. Additional revenue and financing is available to the Port Authority as an extension of its present financial structure. Approximately one year ago, the Port Authority successfully completed a refunding and improvement bond program. A total of $106,200,000 in Authority bonds were marketed by a 277-member syndicate within 24 hours of issue. The trust agreement under which these bonds were offered provides for specific "tests" prior to subsequent issues under the same trust. A preliminary examination of the proposed issue in connection with the South Station complex and present trust has been completed by bond counsel, we understand. It now appears that relevant requirements of the present trust can be met and the additional bonds called for in connection with the South Station program can be issued under it.

The financial record of the Port Authority illustrates the present strength in its operations. In fiscal year ended June 30, 1965, revenues from all sources totaled $12,357,000. This figure was up by more than $600,000 from the previous 1964 total. The revenues realized originated from Logan Airport, Mystic River Bridge and the Port Properties, although to a lesser extent. Current expenses in 1965 totaled $4,486,000, with nearly $8 million in net revenues. Debt service of some $4,400,000; new capital expenditures; operating funds;

and related items accounted for utilization of this revenue. The actual earnings performance of the Port Authority in 1965 was substantially ahead of projections prepared for the $106 million bond issue.

APPENDIXES

Appendix A.

U.S. CUSTOMS SERVICE ORGANIZATION, PRESENT BOSTON REGION

Region and Headquarters	District and Headquarters	Port of Entry
Boston, Massachusetts	Portland, Me.	Portland, Maine
		Bangor, Maine
		Bar Harbor, Maine
		Bath, Maine
		Belfast, Maine
		Bridgewater, Maine
		Calais, Maine
		Eastport, Maine
		Fort Fairfield, Maine
		Fort Kent, Maine
		Jackman, Maine
		Houlton, Maine
		Jonesport, Maine
		Limestone, Maine
		Madawaska, Maine
		Portsmouth, N.H.
		Rockland, Maine
		Van Buren, Maine
		Vanceboro, Maine
	St. Albans, Vt.	St. Albans, Vermont
		Alburg, Vermont
		Beecher Falls, Vermont
		Burlington, Vermont
		Derby Line, Vermont
		Highgate Spring, Vermont
		Island Pond, Vermont
		Newport, Vermont
		North Troy, Vermont
		Richford, Vermont
	Boston, Mass.	Boston, Massachusetts
		Fall River, Massachusetts
		Gloucester, Massachusetts
		Lawrence, Massachusetts
		New Bedford, Massachusetts
		Plymouth, Massachusetts
		Salem, Massachusetts
		Springfield, Massachusetts
		Worcester, Massachusetts

Region and Headquarters	District and Headquarters	Ports of Entry
	Providence, R.I.	Providence, Rhode Island Newport, Rhode Island
	Bridgeport, Conn.	Bridgeport, Connecticut Hartford, Connecticut New Haven, Connecticut New London, Connecticut
	Ogdensburg, N.Y.	Ogdensburg, New York Alenndria Bay, New York Cape Vincent, New York Champlain, New York Chateaugay, New York Clayton, New York Fort Covington, New York Massena, New York Mooers, New York Morristown, New York Rouses Point, New York Trout River, New York Waddington, New York
	Buffalo, N.Y.	Buffalo, New York Niagara Falls, New York Rochester, New York Oswego, New York Sodus Point, New York Syracuse, New York Utica, New York

Appendix B. WHOLESALING MARKET DATA

Table B-1.

WHOLESALE TRADE, U.S. METROPOLITAN AREAS BY RANK, 1963 SALES VOLUMES AND NUMBER OF ESTABLISHMENTS

U.S. Rank	Metropolitan Area	Number of Establishments	1963 1/ Sales Volume
1.	New York 2/	31,368	$57.562
2.	Chicago	12,206	$23.682
3.	Los Angeles - Long Beach	12,216	$17.138
4.	Philadelphia	7,476	$10.252
5.	Detroit	5,643	$ 9.952
6.	San Francisco - Oakland	5,804	$ 9.901
7.	BOSTON	5,809	$ 8.192
8.	St. Louis	3,853	$ 6.582
9.	Minneapolis	3,160	$ 6.564
10.	Cleveland	3,665	$ 6.323
11.	Atlanta	2,821	$ 5.733
12.	Dallas	3,249	$ 5.647
13.	Kansas City	2,513	$ 5.070
14.	Pittsburgh	3,440	$ 4.490
15.	Houston	2,829	$ 4.485
19.	Memphis	1,422	$ 3.957
22.	Baltimore	2,333	$ 3.149
25.	Denver	2,273	$ 2.941
32.	Miami	2,360	$ 1.829

1/ Billions of Dollars

2/ Excluding Newark metropolitan area with $5,058 billion in 1963 wholesale sales

Table B-2. POPULATION TRENDS, NEW ENGLAND STATES, 1950-65

State	Number of Persons 1950	1960	1965 1/	1950-60 Change Amount	Percent	1960-65 Change Amount	Percent
Connecticut	2,007,280	2,535,234	2,832,000	527,954	26.3%	296,766	11.7%
Maine	913,774	969,265	993,000	55,491	6.1%	23,735	2.4%
Massachusetts	4,690,514	5,148,578	5,348,000	458,064	9.8%	199,422	3.9%
New Hampshire	533,242	606,921	669,000	73,679	13.8%	62,079	10.2%
Rhode Island	791,896	859,488	920,000	67,592	8.5%	60,512	7.0%
Vermont	377,747	389,881	397,000	12,134	3.2%	7,119	1.8%
New England Total	9,314,453	10,509,367	11,159,000	1,194,914	12.8%	649,633	6.2%

1/ U.S. Bureau of Census estimates

Table B-3. RETAIL TRADE TRENDS:EMPLOYEES, ESTABLISHMENTS AND SALES, SIX STATE NEW ENGLAND REGION, 1958-1963

Kind of Business	1958 Number of Employees	1958 Number of Estab.	1958 Sales ($000)	1963 Number of Employees	1963 Number of Estab.	1963 Sales ($000)	Sales Gain 1958-63 Amount	Sales Gain 1958-63 Percent
General Merchandise	81,751	4,658	$1,262,058	88,342	3,332	$1,763,892	$+501,834	+39.8%
Apparel	46,088	8,339	858,442	41,814	7,449	938,056	+ 79,614	+ 9.3%
Furniture & Home Furnishings	23,951	6,809	567,515	21,577	5,576	626,046	+ 58,531	+10.3%
Building Materials, Hardware and Equipment	23,458	5,589	685,171	21,592	4,631	728,851	+ 43,680	+ 6.3%
All Other	337,520	87,306	9,078,455	360,671	81,725	11,031,106	+1,952,651	+21.5%
Total	512,768	112,701	$12,451,641	533,996	102,713	$15,087,951	$+2,636,310	+21.1%

Table B-4

WHOLESALE TRADE, NEW ENGLAND METROPOLITAN AREAS BY RANK, 1963 SALES VOLUMES AND NUMBER OF ESTABLISHMENTS

NE Rank	Metropolitan Area	Number of Establishments	1963 1/ Sales Volume
1.	BOSTON	5,809	$8.192
2.	Providence	1,439	$1.212
3.	Hartford	1,054	$1.141
4.	New Haven	708	$0.769
5.	Springfield-Chicopee Holyoke	672	$0.569
6.	Bridgeport	511	$0.513
7.	Worcester	518	$0.471
8.	Portland	376	$0.430
9.	Lawrence	500	$0.420

1/ Billions of Dollars

Table B-5 WHOLESALE TRENDS, NEW ENGLAND STATES, 1958-63

State	1958 Number of Establishments	1958 Number of Employees	1958 Sales Volume Dollars (000)	1963 Number of Establishments	1963 Number of Employees	1963 Sales Volume Dollars (000)	Sales Volume Change 1958-63 Amount (000)	Sales Volume Change 1958-63 Percent
Massachusetts	8,441	88,667	$8,677,739	8,730	94,535	$10,392,159	$1,714,420	19.8%
Connecticut	3,309	35,814	$2,597,982	3,748	40,174	$ 3,475,783	$ 877,801	33.8%
Rhode Island	1,353	12,811	$1,005,206	1,436	13,809	$ 1,198,773	$ 193,567	19.3%
New Hampshire	759	5,906	$ 396,157	794	6,636	$ 505,284	$ 109,127	27.5%
Maine	1,494	12,783	$ 847,517	1,495	13,100	$ 979,542	$ 132,025	15.6%
Vermont	492	3,697	$ 230,503	482	3,709	$ 264,000	$ 33,497	14.5%
Total	15,848	159,678	$13,755,104	16,685	171,963	$16,815,541	$3,060,437	22.2%

Table B-6

WHOLESALE SALES BY KIND OF BUSINESS, 1963: NEW ENGLAND, MASSACHUSETTS AND METROPOLITAN BOSTON 1/

Kind of Business Wholesale	New England	Mass.	Metro. Boston	Boston as % of Mass.	Boston as % New England
Dry Goods & Apparel	2/	$180,023	$146,727	81.5%	(NA)
Apparel & Accessories, Hosiery, Lingerie	3/	166,993	129,853	77.8%	(NA)
Footwear	$241,758	190,617	137,308	72.0%	57.0%
Elect. Appl., TV, Radio	280,093	146,089	125,835	86.1%	44.9%
Hardware	147,479	83,852	58,669	70.0%	39.8%
Plumbing, heating equipt.	295,706	178,609	129,604	72.6%	42.1%
Furniture & home furnishings	291,919	212,606	179,795	84.6%	61.6%
All Other	(NA)	9,233,370	7,284,259	78.9%	(NA)
Total Wholesale Sales	$16,815,541	$10,392,159	$8,192,050	78.8%	48.7%

1/ Thousands of Dollars

2/ Five-state area (excluding Vermont) reported sales of $247.1 million. Sales for the entire dry goods, apparel and accessory, and footwear lines totalled $711.2 million for the same period, in the five state area.

3/ Five state area (excluding Vermont) reported sales of $228.6 million

Table B-7.

REGIONAL POPULATION LEVELS, SELECTED TRADE MART AREAS, 1965

Regional Areas	1965
A. Chicago Mart:	Number of Persons
Michigan	8,218,000
Indiana	4,885,000
Illinois	10,644,000
Wisconsin	4,144,000
Total	27,891,000
B. Dallas Mart:	
Texas	10,551,000
Louisiana	3,534,000
Arkansas	1,960,000
Oklahoma	2,482,000
New Mexico	1,029,000
Total	19,556,000
C. Atlanta Mart:	
Georgia	4,357,000
Florida	5,805,000
Alabama	3,462,000
Total	13,624,000

Table B-8.

WHOLESALE TRADE VOLUME, REGIONAL MART AREAS, 1963

Regional Area and Kind of Business	Sales ($000)
A. Chicago Mart:	
Dry goods & apparel	$ 881,882
Furniture & home furnishings	898,724
All other	53,362,695
Total	$55,143,301
B. Dallas Mart:	
Dry goods and apparel	$ 395,543
Furniture & home furnishings	370,767
All other	26,369,053
Total	$27,135,363
C. Atlanta Mart:	
Dry goods and apparel	$ 438,055
Furniture & home furnishings	406,896
All other	18,137,329
Total	$18,982,280

Appendix C. TRADE MART MAIL SURVEY

MASSACHUSETTS PORT AUTHORITY

141 MILK STREET • BOSTON • 9 • MASSACHUSETTS

TELEPHONE 482-2930

EPHRAIM A. BREST
CHAIRMAN
NICHOLAS P. MORRISSEY
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EDWARD C. MAHER
LAURENCE O. ALBRE, JR.
CHARLES A. CONNORS, JR.
HOWARD W. FITZPATRICK
EDWARD J. KING
EXECUTIVE DIRECTOR

August, 1965

Dear Sir:

The Massachusetts Port Authority is conducting a survey to measure interest in a New England Trade Mart in downtown Boston.

May I ask you to assist by completing the enclosed questionnaire? Questionnaire response will guide us in developing an important new facility to further trade and commerce in New England.

The New England Trade Mart is planned as a major sales and exhibition facility for New England firms and other organizations doing business in New England. The Mart will feature sales showrooms with nearby space for major exhibitions. The exhibitions will have daily exposure to substantial volumes of pedestrian traffic. Meeting rooms and a full range of services will also be provided. Sections of the Mart may be given over to individual industries, such as construction, textiles, etc. A fuller description of the Mart concept is enclosed.

The Trade Mart will be part of a new Greater Boston Transportation Center on the site of old South Station. In addition to the Mart, the Center as now envisioned will contain a full complement of transportation facilities including railroad and bus terminals, a rapid transit system, major parking garages, and a proposed downtown air terminal with a heliport. Also planned is an office tower, a hotel, retail establishments and extensive service facilities.

I would greatly appreciate your filling out the questionnaire and returning it at your earliest convenience to the Massachusetts Port Authority, attention: Paul F. May, Development Director. A postage paid envelope is enclosed.

Very truly yours,

Edward J. King

Edward J. King
Executive Director

Enclosures

MASSACHUSETTS PORT AUTHORITY

[illegible] FACILITIES • BOSTON-LOGAN INTERNATIONAL AIRPORT • [illegible]

141 MILK STREET • BOSTON • 9 • MASSACHUSETTS

TELEPHONE 482-2930

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HOWARD W. FITZPATRICK
EDWARD J. KING
EXECUTIVE DIRECTOR

PLANNED FEATURES OF THE NEW ENGLAND TRADE MART IN THE PROPOSED NEW TRANSPORTATION CENTER, IN DOWNTOWN BOSTON

▶ The Mart will be a significant marketplace consisting of showrooms and sales booths with adjacent permanent exhibition space.

▶ The Mart will be strategically located in a new Transportation Center on the site of South Station in Downtown Boston. The Transportation Center will be the hub of transportation, commercial and world trade activity for Boston and New England.

▶ The Mart will be a key center for customer contact, public relations, sales demonstrations and permanent exhibitions. The Mart will serve New England firms and national firms which do business in the New England market.

▶ Because The Mart will be closely related to the Transportation Center's many terminals, waiting rooms, garages and lobbies, thousands of pedestrians will be directly exposed to The Mart daily.

▶ The Mart will have special sections devoted to specific industries. There may be, for example, a "textile mart," a "building materials mart," a "home-furnishings mart."

▶ The Mart will furnish a wide range of sales and expositian services including: central reception, information and office services; meeting and conference rooms; exhibition services, to include shipping, receiving, handling, design and assembly of displays.

▶ The Mart will draw attention to itself, creating interest and customer attraction through special events, advertising, public relations, changing exhibitions and distinctive architectural design.

▶ The Mart will have the support of a variety of services housed in the Transportation Center: restaurants, a motel, retail services, banks, banquet and meeting rooms, an office tower, and all types of transportation facilities.

▶ The Mart will be constructed with the special needs of exhibitors in mind: high ceilings, heavy load-bearing floors, delivery docks, packing and shipping facilities and large clear space for exhibition.

MASSACHUSETTS PORT AUTHORITY

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EDWARD J. KING
EXECUTIVE DIRECTOR

QUESTIONNAIRE

Relating to a **New England Trade Mart** in the proposed Transportation Center on the site of South Station in Downtown Boston.

This questionnaire is sent you by the Massachusetts Port Authority as a means of evaluating market potential for the Trade Mart. *Your response does not commit you or your firm in any way.* Kindly return the questionnaire in the enclosed envelope to the Massachusetts Port Authority, Paul F. May, Development Director.

See Attachments for a Full Description of The Trade Mort

* * * * *

1. Your name, title and firm (optional)_____

2. What is your firm's business?_____

3. In your opinion, would your firm probably be interested in utilizing **The Trade Mart** for sales and exhibition purposes? *(check one)*

   _____ Yes, my firm would probably find **The Mart** useful in its selling and exhibition programs.
   _____ No, I don't think my firm would have much use for space in **The Mart.**
   _____ We would probably use **The Mart** under the circumstances listed below.
   _____ Don't know.
   Comments: _____

4. Do you think *other* firms in your industry would take space in **The Mart** for sales and exhibition purposes? *(check one)*

   _____ Yes, I think other firms in my industry would use it. *(Please list examples in "Comments" below.)*
   _____ No, I don't think it would be much used by firms in my industry.
   Comments: _____

More on Other Side

5. In your opinion, would *suppliers* of your industry be likely to use **The Mart** as a means of reaching New England markets? *(check one)*

_____ Yes, I think many suppliers in my industry would use **The Mart.** *(Please list examples in "Comments" below.)*
_____ No, I don't think many suppliers would use **The Mart.**
_____ Don't know.
Comments: _____

If the answer to 3, 4 or 5 is "yes" — please go on.

6. In what ways do you think your firm, or firms like yours, would be most likely to utilize **The Mart**?

_____ They would probably want to rent showroom or sales booth space *only*.
_____ They would probably want *both* showroom space *as well as* adjacent permanent exhibition space in a large public display area.
_____ They would probably want public exhibition space *only*, but no showroom or booth space.
_____ In addition to the above, they would probably also want conventional office space in a nearby office tower.
_____ Don't know.
Comments: _____

7. In your opinion, what would be the permanency and timing of use of **The Mart** for your firm, or firms like yours? *(check one)*

_____ They would probably rent showroom and/or exhibition space on a *year-around* basis.
_____ Their use would more likely be temporary, geared to certain sales events or seasonal needs *(please describe these events or needs in "Comments" below).*
_____ Don't know.
Comments: _____

8. Roughly, how much space would your firm, or other firms like yours, probably need in **The Mart**? *(please answer both)*:

a. _____ square feet of showroom or booth space.

b. _____ square feet of exhibition space in a large display area.
Comments: _____

9. What services, facilities and design features would be important for a firm like yours in **The Mart**? *(check one or more)*
_____ Nearby office space.
_____ Meeting and conference rooms.
_____ Central reception and information service.
_____ Secretarial, telephone answering and other office services.
_____ Services related to exhibitions: handling, storing, shipping, design and assembly.
_____ High ceilings and/or heavy load-bearing floors.
_____ *Others (please list)* _____

END — Thank You

Table C-1. TRADE MART MAIL SURVEY

Number of New England 1/ Mailings by Industry Group

SIC Code	Industry Group	Number of Mailings	
1. Manufacturing			
22	Textile Mill Products	111	
23	Apparel	31	
25	Furniture and Fixtures	20	
26	Paper and Related Products	58	
27	Printing and Publishing	41	
28	Chemicals	46	
30	Rubber and Plastics	47	
31	Leather Products	65	
32	Stone, Clay and Glass Products	30	
34	Fabricated Metal Products	113	
35	Machinery, except Electrical:		
351	Engines and Turbines	2	
353	Construction & Materials Handling Eqmt.	4	
354	Metalworking Machinery	5	
3551	Food Products Machinery	10	
3552	Textile Machinery	15	
3554	Paper Industry Machinery	9	
356	General Industrial Machinery	4	
357	Office, Computing & Accounting Machines	4	
358	Service Industry Machines	4	
	Sub-Total, Machinery, except Electrical	(57)	
36	Electrical Machinery and Equipment	79	
37	Transportation Equipment	19	
38	Instruments	39	
	Sub-Total, Manufacturing		(756)
2. Wholesale Trade			
501	Automotive	9	
502	Drugs	13	
503	Dry Goods and Apparel	15	
506	Electrical Goods	10	
507	Hardware, Plumbing and Heating	17	
508	Machinery, Equipment and Supplies	7	
5097	Furniture and Home Furnishings	20	
	Sub-total, Wholesale Trade		(91)
	Grand Total		847

1/ Connecticut, Maine, Massachusetts, New Hampshire, Vermont, Rhode Island

Table C-2. MAIL SURVEY: QUESTIONNAIRES MAILED AND RETURNED

Area	Mailed	Questionnaires Returned 1/	
		Number	Percent
New England Firms	858	281	32.8%
New York - New Jersey Firms	215	39	18.1%
Largest U. S. Industrial Operations	200	35	17.5%
Total	1273	355	27.9%

1/ Through October 15, 1965

Table C-3. MAIL SURVEY: TABULATION OF RESPONSES[1/] - NEW ENGLAND FIRMS

Response	Questions[2/] #3	#4	#5
"Yes"			
Number	52	72	51
Percent	18.5%	25.6%	18.1%
"No", "Don't Know" or No Answer			
Number	229	209	230
Percent	81.5%	74.4%	81.9%
Total Response			
Number	281	281	281
Percent	100.0%	100.0%	100.0%

1/ Through October 15, 1965

2/ Questions were:

#3 "Would your firm probably use the Mart?"

#4 "Would other firms in your industry use the Mart?"

#5 "Would suppliers of your industry use the Mart?"

Table C-4. MAIL SURVEY: TABULATION OF RESPONSES[1/] - NEW YORK & NEW JERSEY

Response	Questions[2/] #3	#4	#5
"Yes"			
Number	8	12	8
Percent	20.5%	30.7%	20.5%
"No", "Don't Know" or No Answer			
Number	31	27	31
Percent	79.5%	69.2%	79.5%
Total Response			
Number	39	39	39
Percent	100.0%	100.0%	100.0%

1/ Through October 15, 1965

2/ Questions were:

#3 "Would your firm probably use the Mart?"

#4 "Would other firms in your industry use the Mart?"

#5 "Would suppliers of your industry use the Mart?"

Table C-5. MAIL SURVEY: TABULATION OF RESPONSE[1/] - NATION'S LARGEST INDUSTRIAL FIRMS

Response	Questions[2/] #3	#4	#5
"Yes"			
Number	2	4	2
Percent	5.7%	11.4%	5.7%
"No", "Don't Know" or No Answer			
Number	33	31	33
Percent	94.3%	88.6%	94.3%
Total Response			
Number	35	35	35
Percent	100.0%	100.0%	100.0%

1/ Through October 15, 1965

2/ Questions were:

#3 "Would your firm probably use the Mart?"

#4 "Would other firms in your industry use the Mart?"

#5 "Would suppliers of your industry use the Mart?"

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